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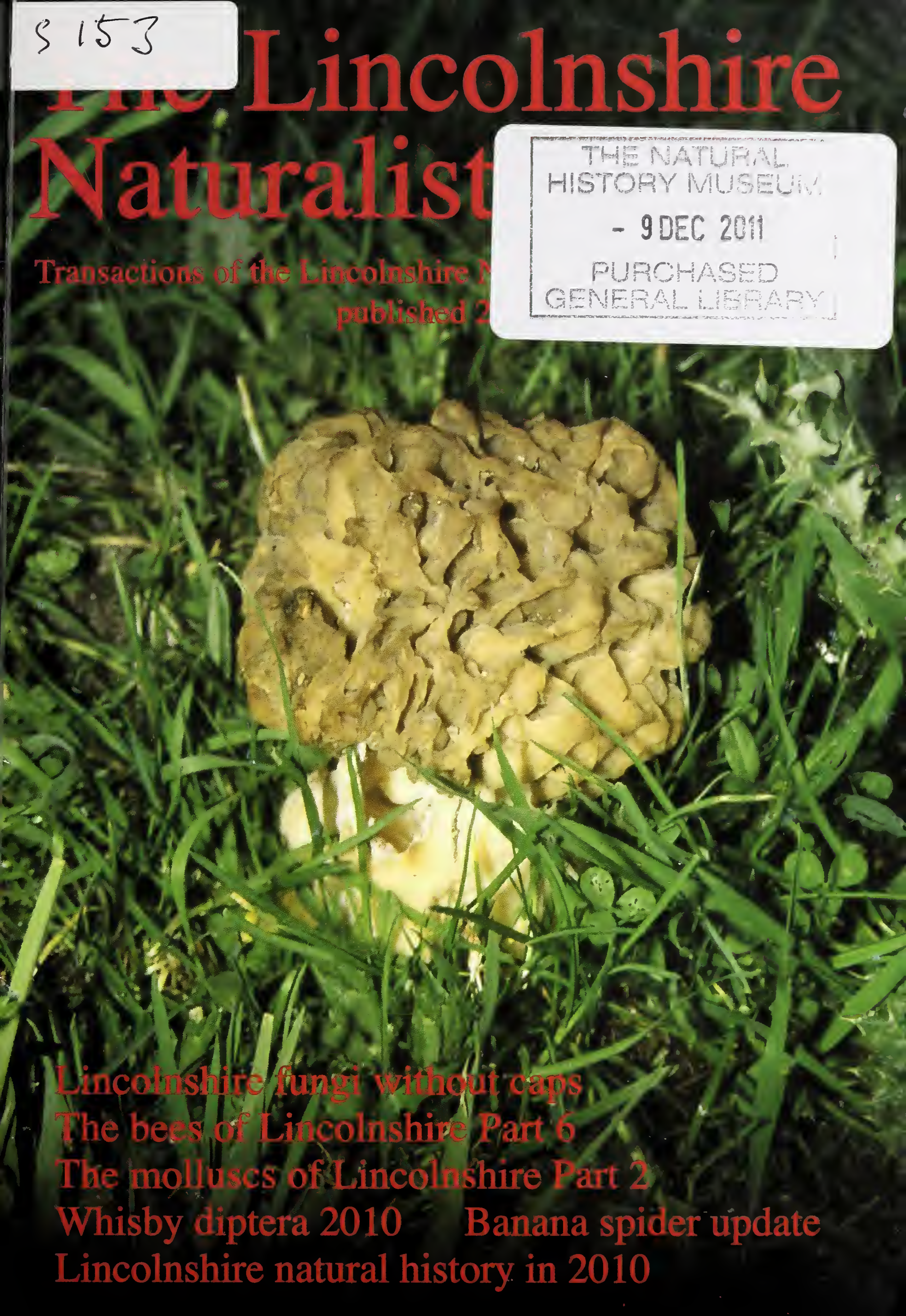

Lincolnshire fungi without caps
The bees of Lincolnshire Part 6
The molluscs of Lincolnshire Part 2
Whisby diptera 2010 Banana spider update
Lincolnshire natural history in 2010

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PRESIDENTIAL ADDRESS

SOME LINCOLNSHIRE FUNGI WITHOUT CAPS

Ken Rowland

It has just been suggested to me that the title as published is a little bit mundane and that I should change it so how about 'Who needs a cap to keep the rain off?' or 'Who needs a cap anyway?' or 'Parasols not needed here'. We will see if they fit later.

To begin with, I am not a professional, just an enthusiastic amateur in the study of the group of things, objects or organisms which are neither plants nor animals, that is called the fungi. It has to be noted that over the past ten years or so the practical study of these, that is field mycology, has increased in popularity many thousands of times, not just in the edibility stakes (which can be very dangerous) but from the desire to know more about the families of these mysterious things. They do not have chlorophyll, so there are no green fungi, therefore they cannot generate their own food and probably the majority of species have to live as saprophytes, that is scavengers or recyclers. Some survive as parasites that steal food from other plants and others live in a symbiotic relationship with other plants or more likely trees; they take sugars from the tree or plant and return minerals in a mutually acceptable relationship. This gives an exceptionally large subject area that is impossible to cover in this talk.

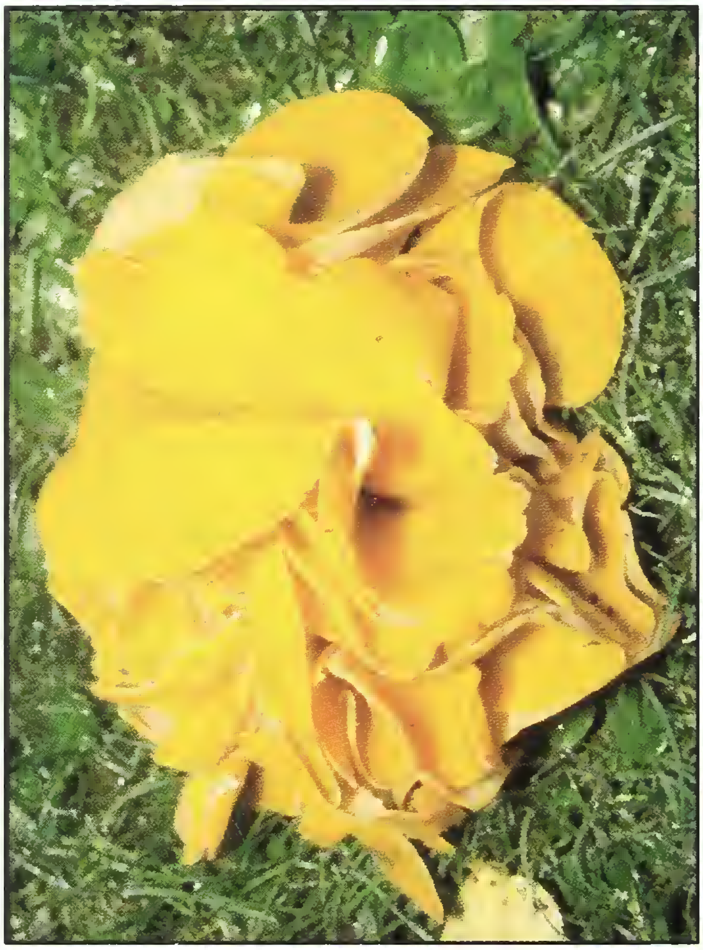
Amanita muscaria 'red with white spots' - a typical fungus
Photo K. Rowland

When one talks about the fungi, the immediate thoughts of most people is of something with a cap and a stalk, preferably red with white spots, or sticking out from the side of a tree such *Polyporus squamosus*.

The next question is usually 'Can you eat it?'. The usual answer to which is 'Yes, once or possibly twice, if you have a good set of teeth'.

Having decided that to look at the whole fungal flora of Lincolnshire would probably take about two weeks, one of the classes of fungi not so well known should be given some publicity; a group which many people do not even recognise as being fungoid but a group I have found interesting. The Ascomycetes are commonly called the cup fungi although this is not strictly true for all of them as we shall see later. I am not going to launch into scientific details of what are operculate and inoperculate ascus or whether the paraphyses are club shaped or not but simply to discuss:

- what you are likely to see in and around Lincolnshire, even your own garden if you look closely;
- show a few views of the internal structures just to relieve the monotony; and also
- to prove that I have followed up the methods proposed in my last Presidential Address from twenty years ago although I haven't used a pinhole camera for this talk.



Aluria aurantia. Orange peel fungus . A cup fungi. (Page 267)

The term Ascomycetes comes from the way the spores are dispersed by being shot out of the end of a finger-like tube called an ascus by hydraulic pressure as opposed to the cap-type Basidiomycetes' method of ejecting the spores from a basidia relying on gravity and air currents to disperse them. Normally there are eight spores in each ascus, or sometimes multiples of eight, although there are one or two exceptions, but even these start off with eight.

That being a very simplified description we will now pass on to some of what we can find in Lincolnshire. The present thinking is that there may be more species of fungi in the world than there are species of insect so that gives plenty of scope for new species and even totally new families to be discovered in time (hence the word 'some' in the title).

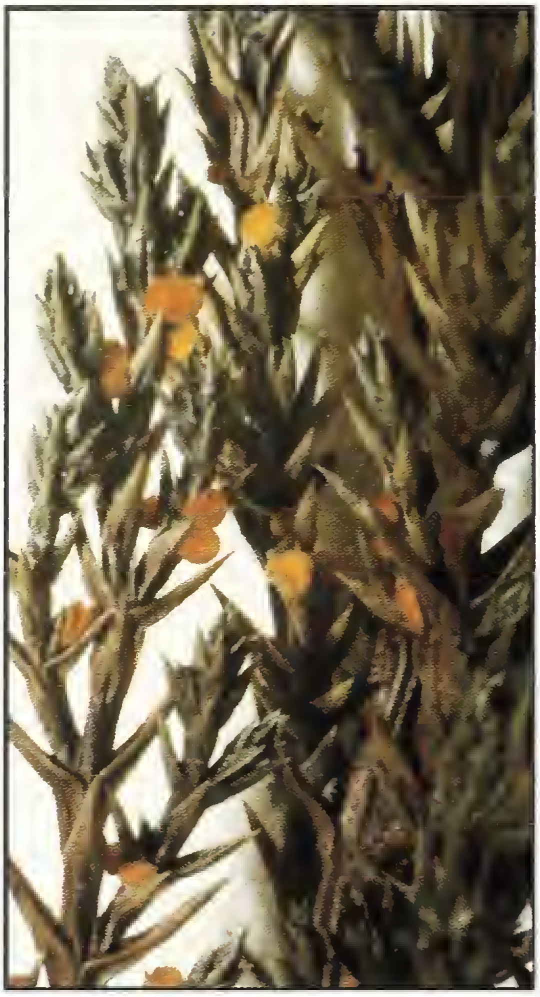
The Ascomycetes are an ancient family going back in the fossil record something like two or three hundred million years and they cover some 264 families with over thirty-two thousand recognised species, some 34% more than the Basidiomycetes. Of the thirty-two thousand species identified we have about seven hundred different species recorded in this county. Recording has been taking place in Lincolnshire from the late 1890s starting with the Rev. Woodruff Peacock then Sir Richard Hawley in the early 1900's and through to Grace Waterhouse, Dr Maurice Lubin, and Jack Houghton; some very respected names! Latterly it has been me and now the position of recorder has passed into the hands of Ray Halstead. Recording reached its peak in the mid-1980s and again around the millennium although there were some lean years in the middle but that leaves plenty of scope for the next hundred years. Lincolnshire holds second place in the Britain for the number of records, namely about 55,000 in one of the national databases. It is also worth noting that the ascomycetes are one of the symbiotic partners of lichens, so there are probably many thousands of species in the lichen families of all types. These I will leave for my friend Prof. Mark Seaward. Some are also recognised as galls; this is where we sometimes cross swords with the gall specialists over interpretation. I don't think we have time this afternoon to look at all of the seven hundred species. Dennis (1978) devotes six hundred pages to a small part of the Ascomycete family, the vast majority of which I have never seen or even heard of, so we will consider a small selection of what we may encounter and may not even notice or not even realise that they are fungi in and around this county.

When you look at the records it is very noticeable that the recording of various families goes in cycles as some person takes an interest in a particular group; in the Lincolnshire records most of the Myxomycetes, that is the slime moulds, were added by the late Jack Houghton, whereas most of the powdery mildew records (which are ascomycetes) over the last ten years have been added by me. They are an interesting family to me and there are plenty to look at, some 110 species, most of which are host-specific which does help.

The large majority of the ascomycetes are saprophytes, that is they are scavengers recycling old dead wood, animal droppings, etc., utilising the cellulose and lignin and returning minerals to the ground for further use by the higher plants. As in all walks of life some are parasites, as noted above, with the powdery mildews and some others that will be mentioned later. A very few are mycorrhizal, that is living in a symbiotic relationship with other plants, lichens and with trees, eg, the edible truffles which don't occur in Lincolnshire yet as far as I know, but may do so under cultivation in the not-too-distant future.

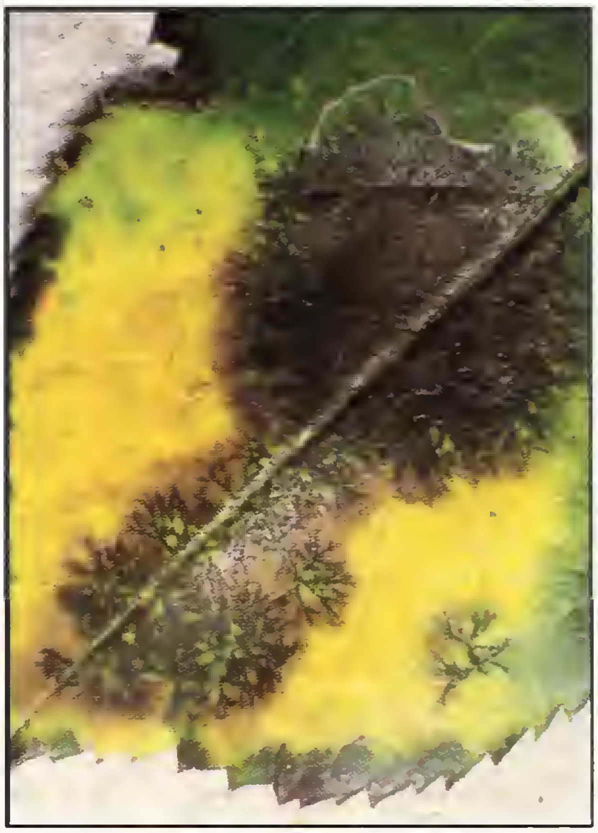
To start with, one of the largest of the Ascomycetes, *Morchella esculenta* the common morel (up to 75mm across) occurs frequently all over the county and is a disappointment to some people. It is one of only two edible species mentioned in this talk and also one of the few having a more-or-less English name. It is very tasty stuffed with sausage, the few slugs in the cavities add to the protein value. In the same family *Verpa conica* has only been found on three sites since it was first recorded in 1895 near Alford. The next record was not until 2002 at Moor Closes and it has since then turned up on two more sites. Did it disappear for a hundred years or was it just not seen? Whatever the answer, it probably means that there are thousands of other species in the county waiting to be found.

I turn now to one of the smallest, in physical size, of the families other than those that are just flat crusts (which are considered later), the powdery mildews. These are some of the parasites I mentioned earlier, these fruiting bodies are about 0.1mm diameter. *Podosphaera tridactyla* is one of the powdery mildews which are, as I mentioned earlier, mostly specific to a particular plant family, this one being found on the Prunus group. The leaves have a powdery coating and ascocarps or fruiting bodies appear on the underside of the leaf in the majority of cases. Break one of these ascocarps open and you can see the ascus with the spores. The other thing to notice are the appendages like television aerials which differ on other species and can be used for identification on some species such as *Sawadae bicornis* which are like bishops' crosiers or shepherds' crooks. *Uncinula adunca* var. *regularis* has one that looks like miniature daisy flowers



Pithya cupressina on juniper (left)
Photo K. Rowland

Whilst still looking on leaves one can find the unusual *Pithya cupressina* which is rather inconspicuous on juniper leaves and is pretty rare in Lincolnshire, (recorded once in the county), but then juniper is not a common species around here. A couple you may find on your rose bushes are *Sphareotheca pannosa* which is like cotton wool around the stem and one we can always look forward to finding *Diplocarpon rosaea* also known as black spot, the scourge of all rose growers.

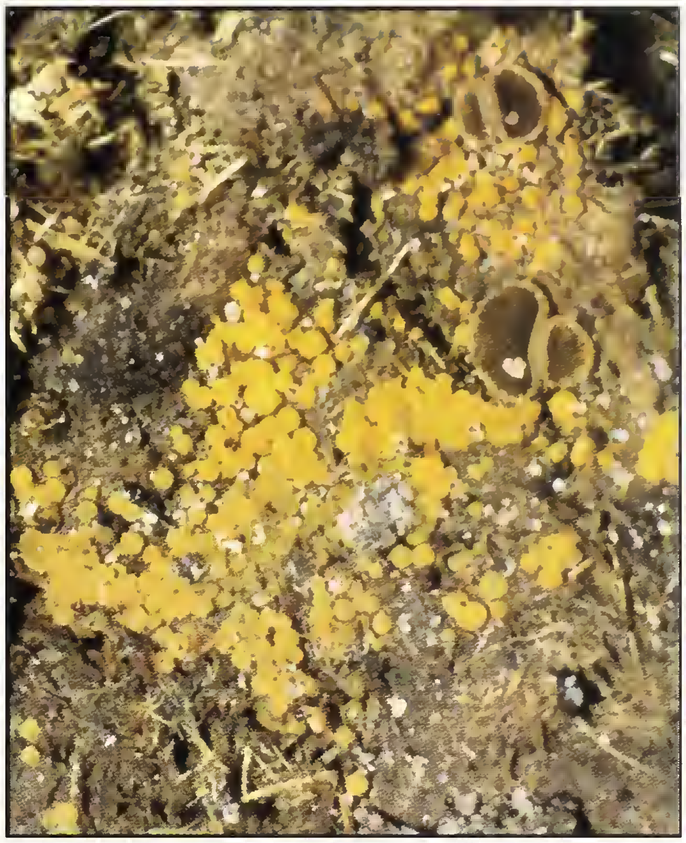


Diplocarpon rosaea (right)
Photo K. Rowland

Moving on to two species that do look like cups but are somewhat inconspicuous living on cow pats or other animal droppings where over a hundred members of the ascomycete family can be found. Ascomycetes are not the first colonisers but are probably the second and are therefore still fairly early in the fungal colonisation sequence. This is a clear example of fungi as the saprophytes or recyclers; the study of dung fungi is a specialist field although one is definitely not allowed to keep specimen of these for identification in the refrigerator and penalties are pretty high if found out.

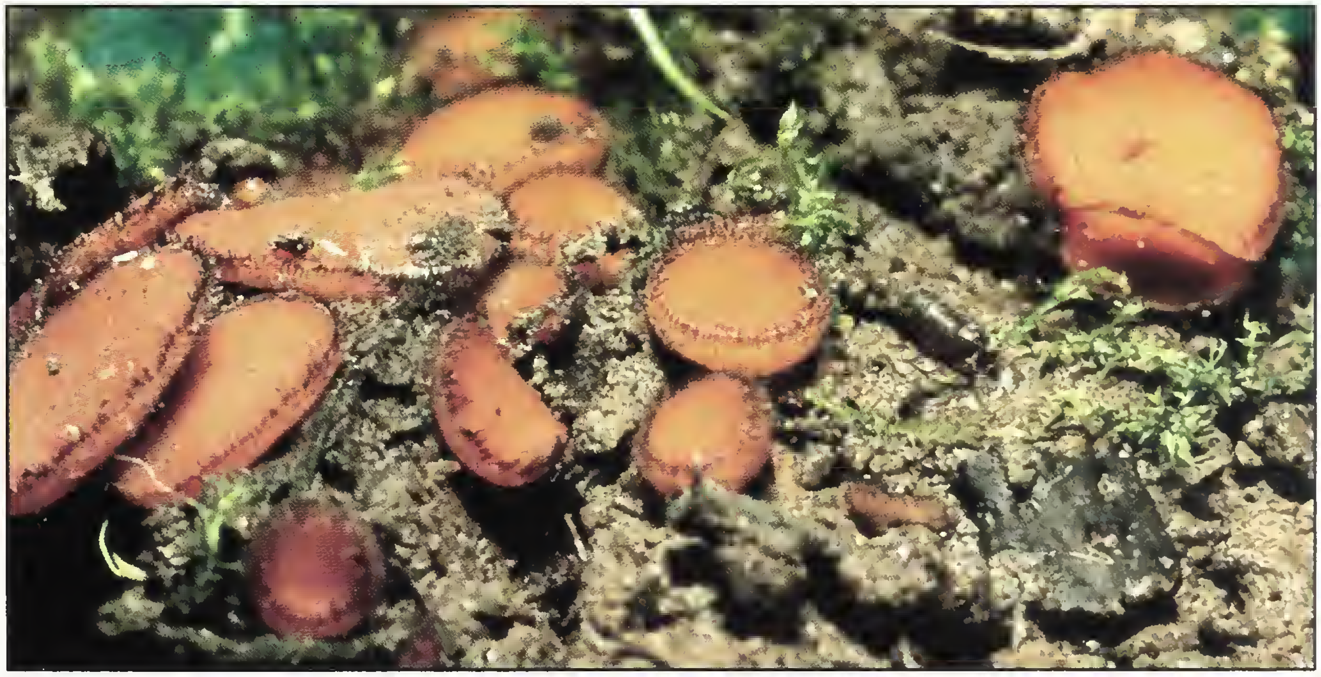
One can find 'two for the price of one' such as *Ascobolus furfuracea* and *Coprobia granulatus* on a fairly fresh cow pat. Although I have noticed over the last year or so that the modern cow pats don't seem to generate the same amount of fungal growth; possibly due to all the antibiotics and other things that are given to cows to keep us humans healthy, also there are notably fewer cows about.

Ascobolus furfuracea and *Coprobia granulatus* on a cow pat. (Page 216)
Photo K. Rowland

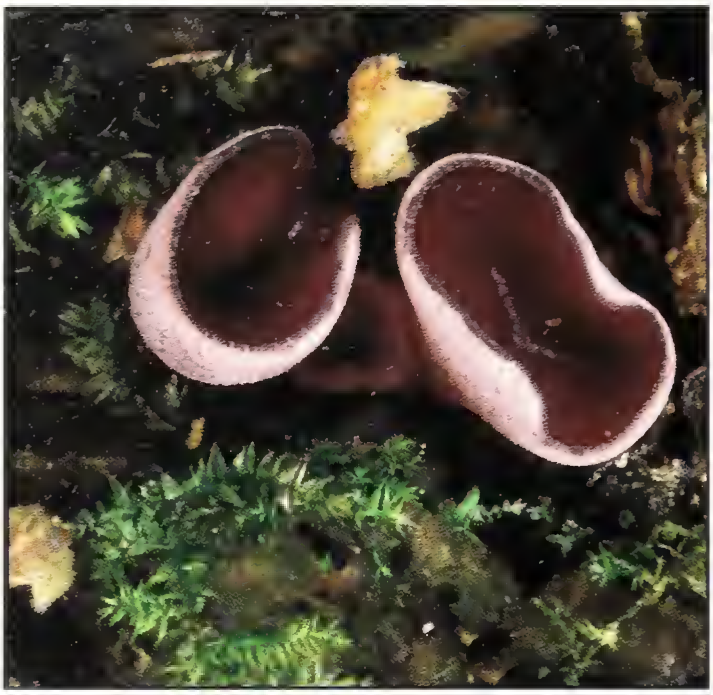


The Ascobolus family have an interesting and clever way to disperse their spores. The spores ripen in groups of four, the darker ones are ejected first, the remaining four then ripen and are discharged at a later date. Presumably this allows for some adverse weather conditions or different grass growth for the cows to eat and swallow the spores to continue the cycle, unlike normal cup fungi that discharge all eight spores at one time and rely on air currents to disperse them.

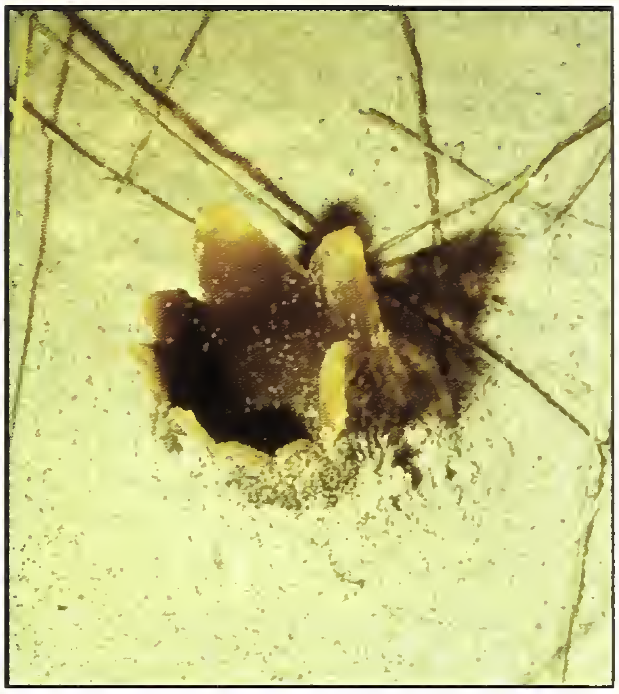
Whilst still at ground level, probably the main place for finding cup fungi, there are some that thrive on bare soil. *Aluria aurantia* the orange peel fungus (the other promised edible species) is one such species and can be fairly large and conspicuous; some books state that is ideal sliced in salads but should not to be eaten in any quantity. *Scutellinia scutellata* and some of the very small ones have to be looked for as they prefer the sides of cart ruts and old wet stumps at ground level.



Scutellinia scutellata Photo K. Rowland



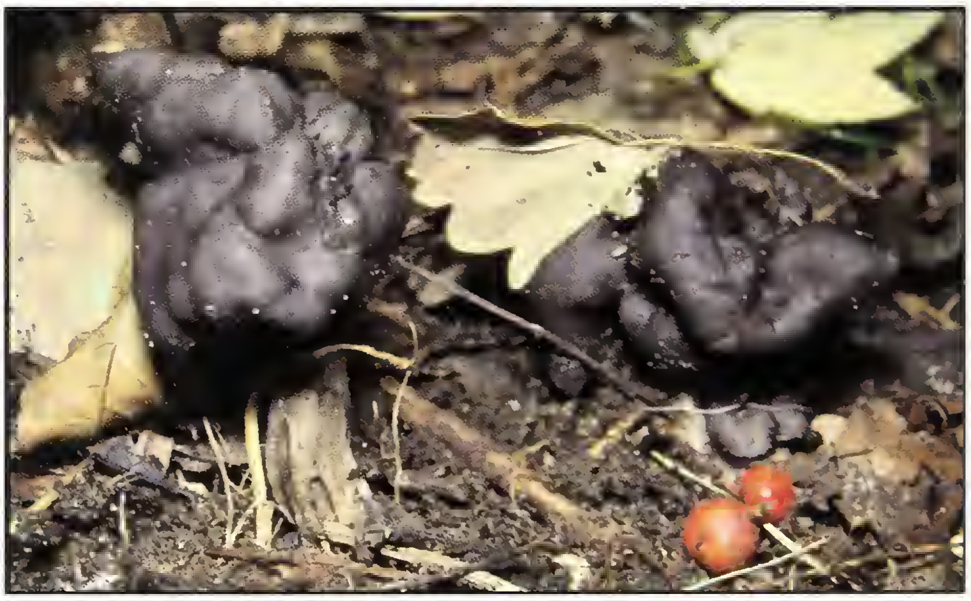
Peziza ionella *Photo K.* Rowland



Peziza ammophilla Photo K. Rowland

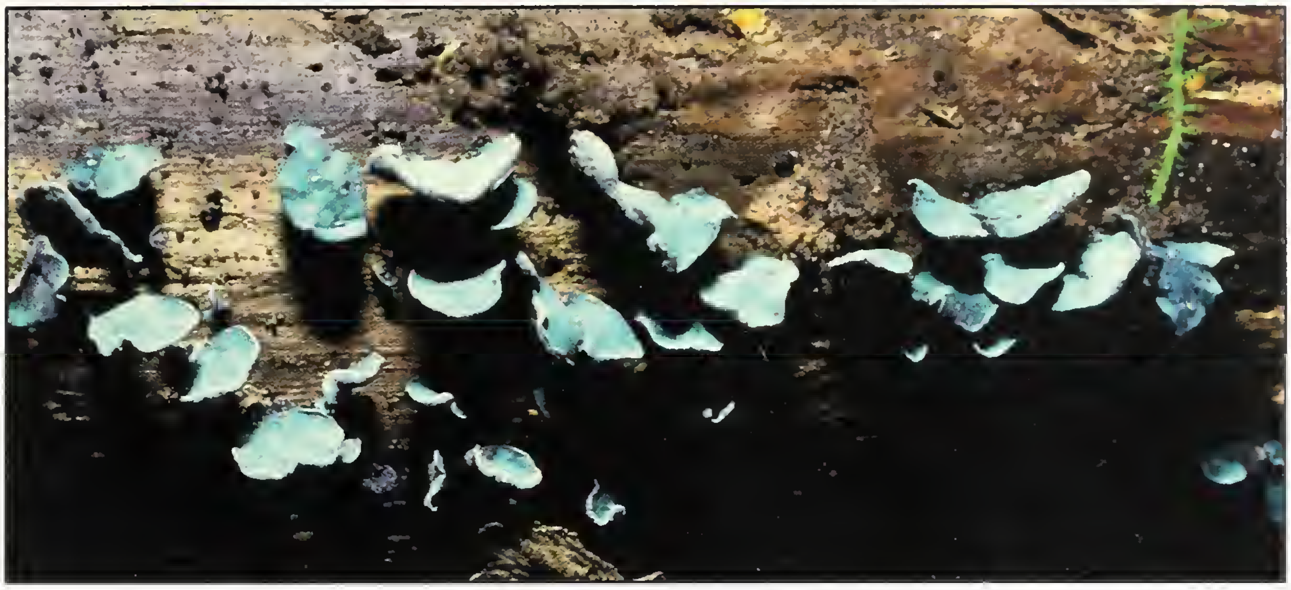
The peziza family are relatively common ground-growing species some relatively common such as *Peziza michelii* while some are quite rare such as *P. ionella* which is a very nice mauve blue. Some have very peculiar tastes, eg, *P. cerea* can be found on various substrates like carpets and the joints in concrete paths. Another specialist, *P. ammophila*, is in the sand dunes at Gibraltar Point where it grows in association with marram grass.

A lot of the cup fungi appear in the early spring which is one of the reasons why they are overlooked such as the species *Sarcoscypha coccinea* the scarlet elfcup; there has been a great deal of debate in the last year or so in that the one most commonly found is *S. austriaca*. Unfortunately the main difference is in the shape of the hairs round the outside of the cup as one is straight and the other curly. This is impossible to see in the field and most difficult even under the microscope. Having said that spring is the season for cup fungi, there is still plenty to see in the latter parts of the year probably not looking like cups but still ascomycetes. Again they are mainly found on the soil. *Helvella crispa,* the white helvella and *H. lacunose,* its black cousin, are both quite frequent finds at the side of paths.



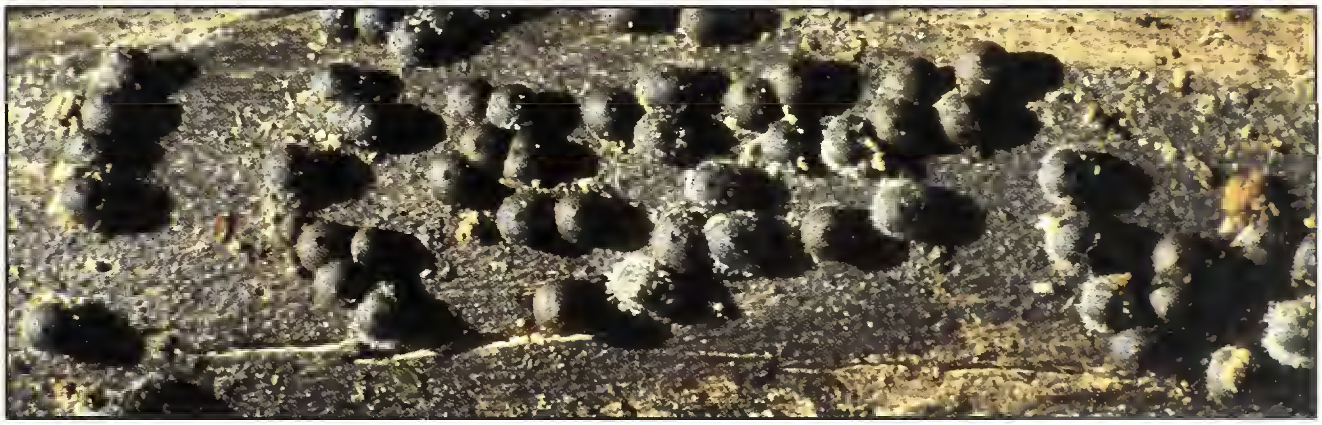
Helvella lacunose
Photo K. Rowland

Another group we may find in grass and not appreciate that they are ascomycetes or even fungi are the earth tongues such as *Geoglossum* *cookeianum* . By the way the rest of the yellow and white golden spindles found in grassland are not ascomycetes, they belong to the basidiomycete group and just to make life even more difficult some even classed as bracket types.



Chlorociboria aeruginascens Photo K. Rowland

Now we move on to cups on vegetative matter such as wood, fruit bodies, etc. Some of these can be quite spectacular such as *Chlorociboria aeruginascens* which is mainly found on old oak wood. It creates the green staining to the wood much loved by cabinet makers for inlay work in years gone by. Some look very dull as *Diatrype stigma*, one of the very common resupinate fungi. *D. stigma* is one which a lot of people would not recognise as being a fungus. *Xylaria hypoxylon* the stag's horn fungus is one of the most common in old woodlands, and if you were to look closely among the beech mast you will more than likely come across *X. carpophila* although it is inconspicuous.

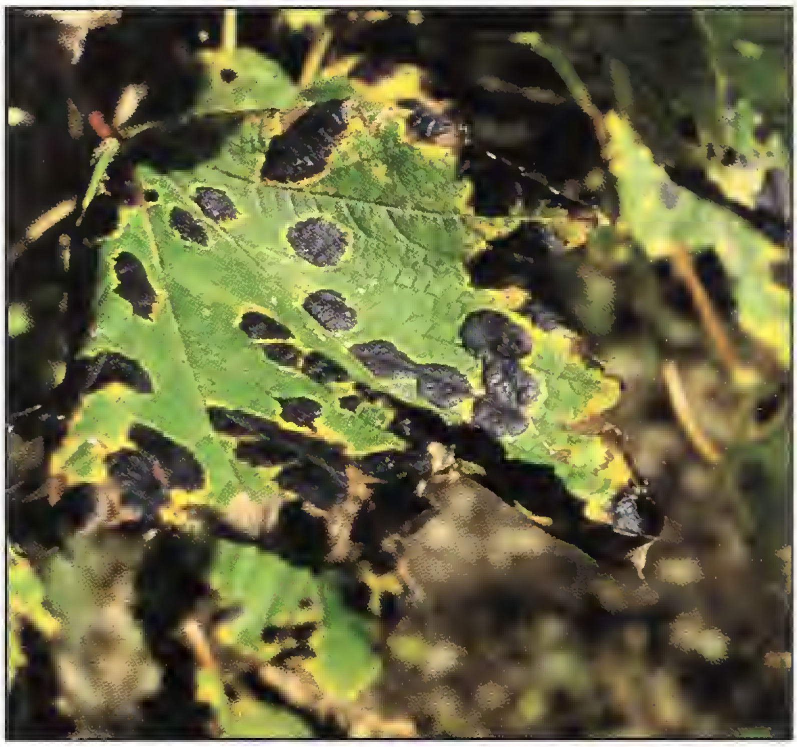


Lasiosphaera ovina Photo K. Rowland

Lurking on old bits of decorticated wood you could see *Lasiosphaera ovina* which is about a millimetre in diameter and easily mistaken for insect eggs. These have an interesting spore shape resembling walking sticks which certainly allows for easy identification under the microscope.

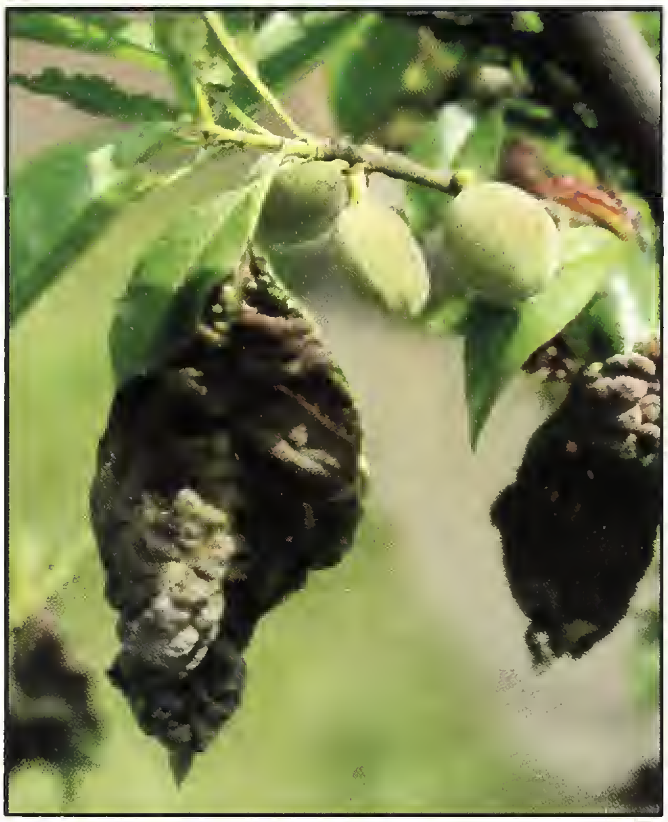
I mentioned earlier the fungi that look like crusts and these include *Corynesporum olivacea* which appears on nearly all old branches and *Diatrype disciformis* often found on old fallen oak branches erupting through the bark. There are literally hundreds of these resupinates most of which are specific to the tree they grow on, and again they are scavengers or recyclers converting old branches discarded by the tree into reusable minerals.

A couple which are parasitic on the Boletus and Lactarius fruit bodies are *Apiocrea chrysosperma* and *Hypomyces ochraceus*. The first is easy to spot with its bright lemon yellow colour, the other is a bit more difficult as it attacks the gill structure of Russula and Lactarius turning the fruit body hard like it was mummified. Also among the parasites is *Claviceps purpureum* which replaces the seed in corn or grasses. It is better known as ergot which caused ergotism (St. Anthony's fire) in the Middle Ages where people's fingers and toes could drop off if the ergots got ground up with rye grain. This has a dual personality in that these ergots fall to the ground and the following spring germinate to release spores to re-infect grasses in flower above, although it is not all doom and gloom as extracts from ergot are used in the pharmaceutical industry in medicines and the last recorded outbreak of ergotism was about eighty years ago. There is another one which also has this dual personality and which you are all no doubt familiar with but which a lot of people do not realise is a fungus and that is *Rhytisma acerinum* tar spot fungus found on sycamore. In the autumn these leaves fall to the ground and the following spring some of them, dependent on moisture conditions, develop into a cup fungus which sheds its spores when the sycamore buds are developing to re-infect the new year's leaves. This fungus is becoming more common as the air quality improves with less sulphur in the atmosphere.

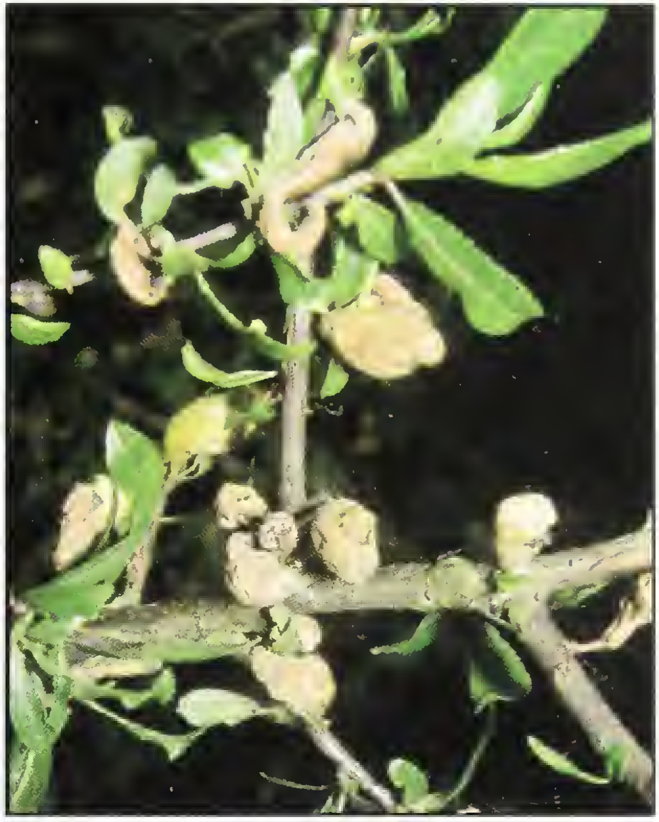


Rhytisma acerinum tar spot fungus on sycamore Photo K. Rowland

The final three species are also classified as galls (as I mentioned earlier) since they cause distortion to the leaf or fruit. *Taphrina deformans* peach leaf curl as its name implies is usually found on peach family leaves. Another which has only been really noticed in the last year or two is *Taphrina amentorum*, or in the gall world *Taphrina alni,* which I found on alder catkins and *Taphrina pruni* is found on *Prunus spinosa* blackthorn fruit where it distorts the fruit both of the latter. It was only being first recorded in 2000, probably being overlooked for a hundred years. Or was it?



Taphrina deformans peach leaf curl (Page 220) Photo K. Rowland



Taphrina pruni on blackthorn (Page 220) Photo K. Rowland

This has been a very brief look at one section of the fungi world but one which needs much more study and recording to see what ascomycetes we have in the county. Incidentally a lot of the names I have used may or will be changed when DNA testing gets under way but as far as I am concerned these names are the ones in all the books and keys that we have been using for many years so they are recognisable. If you use them just tell us which book you are using.

Over the last year or so some replacement members are coming forward to cover a recording section that has always been relatively thin on the ground. Now I have handed over the reins as mycological recorder I hope I have whetted the appetite of some other members to study the fungi, a fascinating group somewhere between the plants and animals. Hopefully I am going to be around for a while yet to help with identification as and when required.

As an afterthought it is possible that if you ask Ray Halstead for an identification and then follow up by asking me you could get two different answers for the same fungi, both will be correct because in the last year or so some bright person gave the boys at Kew a DNA testing kit and at the moment they are moving things around with wild abandon, but fortunately as yet they haven't got to the ascomycetes.

Also to make things more complicated some books have the new names and obviously most books the old names, and if you are into the new English names then some books seem to have generated a series of names of their own. These difficulties seem to me to be a very good reason to retire.

Bibliography

R.W.G. DENNIS *British Ascomycetes* 1978 Cramer (Vaduz)

Presidential profile - Ken Rowland

Ken Rowland, a true Lincolnshire man, was born at the Old Brickyard at Waddington in 1927. His father being in India, his family lived with his grandparents giving him the old derelict brickyard (circa 1914) as a playground with its owls, rabbits, stoats and fish in the old boiler reservoir. Mushrooms were always on the autumn menu.

After leaving school, an apprenticeship at Ruston Iron Works as a draughtsman led in the mid-1940s to being seconded to Ruston Boiler works as a design draughtsman on boilers where he stayed until 1951 when he left to join a small team at Leys Malleable Castings to mechanise both the Lincoln and Derby foundries. Here he stayed as project engineer/manager until he retired in 1992.

Having been introduced to photography by his then future father-in-law in the mid-1940s, photographing flowers became the norm as they don't move. Later mushrooms entered the picture and not being able to identify them, he joined the LNU in 1973, where under the guidance of Jack Houghton, he learned about the fungi. He also joined the British Mycological Society and the Lincolnshire Wildlife Trust more or less at the same time.

1990 saw him being asked to become President of the LNU under the banner of Optics, then in 1995 the untimely death of Jack Houghton led him to take on the mantle of Mycological Recorder, a position he held until this year. Now again in 2010 he has been honoured with a second invitation to be President but this time under the banner of Mycology.

WHISBY DIPTERA

Phil Porter

This is a very provisional account of diptera collections undertaken at Whisby (except where otherwise stated) during 2010. Thanks are due to Richard Davidson who collected all but a handful of the specimens.

Therevidae Stiletto flies
A male of *Acrosanthe annulata* supported last year's female. Other species included *Thereva bimaculata* and a currently unidentified specimen. These are sand dune species found in only occasional areas away from coasts.

Sarcophagidae Flesh flies
Senotainia conica 21/6 and *Metopia species* 21/6-22/8, are brood-parasitic on the community of solitary wasps there. The Metopias were all females of a species pair which are not separable in British representatives.

Tabanidae Horse flies
Tabanus autumnalis 8/7 and *Haematopota crassicornis* 29/6. *T. autumnalis* favours coastal levels but is also scarce but widespread inland while *H. crassicornis*, although common enough, is more local than the common cleg *H. pluvialis* which incidentally was not recorded during the year.

Asilidae Robber flies
Choreades marginata, 3 records, 28/7-19/8, previously thought to be strictly southern in Britain but now evidently spreading northwards, requiring deadwood for breeding habitat. *Neoitamus cyanurus* also occurred on 8/7. The common *Machimus atricapillus* was frequently recorded, 7 recorded 8/7-16/8.

Bombyliidae Bee flies
Bombylius major was recorded from 11/4-16/5.

Conopidae
Conops flavipes recorded at Orchid Glade 29/7. The common *Conops quadrifasciata* was less frequent than in 2009 but was recorded 6/8-19/8. Meanwhile *Sicus ferrugineus* was more common in 2010 with 5 records 20/6-28/7. These flies are parasites of bumblebees, attacking them in flight.

Syrphidae; Hoverflies
Dasysyrphus venustus, 16/5, previously rarely recorded. Also *D. albostriatus*, 13/7. *Chalcosyrphus nemorum*, 31/5-28/7 several recorded, requires saturated dead wood, a habitat deliberately provided at Whisby. *Riponnensia splendens*, 6/7, *Platycheirus rosarum,* 8/7, *P. granditarsus,* 26/5, *Anasimyia lineata* 8/8 (at nearby Boultham Mere Nature Reserve), *A. contracta*, 13/6-1/8, *Baccha elongata*, 15/8-4/11 and the metallic *Chrysogaster solstitialis* was frequently met with, 20/6-29/7.

Rhinophoridae
Rhinophora lepida 10/7, and *Paykullia maculata* 15/8, are both fairly common woodlouse parasites typical of the family and unremarkable in appearance.

Rhagionidae Snipe flies
Chrysopilus cristatus very common in late spring. *Rhagio tringarius* was regular in July. The smaller *Rhagio lineola* also occurred more than once 15-22/7. We have a controversial *Rhagio* which seems to resemble the non-British *R. vitripennis* but will more likely turn out to be an extremely pale winged example of the common *R. scolopaceus*..

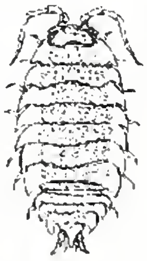
Xylomyidae
Solva marginata 4/7, is a sawfly mimic which was found with rotting sycamore timber which is mentioned as a likely breeding pabulum.

Stratiomyidae Soldier flies
Stratiomys singularior 18/7, occurred for a second time, continuing to raise questions about point of origin given its supposed preference for brackish ditches. The very handsome yellow *Oxycera rara* 26/7, is now more or less expected during any given year. The green-coloured *Oplodontha viridula* was frequent in July compared to last year. *Beris* species included *B. morrisii* 4/7, and *B. vallata* 13/7. *Sargus bipunctatus* 28/10-4/11, put in a typical autumn appearance. *Chorisops tibialis* occurred once, 23/7.

Sciomyzidae Snail-killing flies
This family is typical of wetland habitats and has snail-killing larvae. The striking genus *Sepedon*, with front tibiae and femora adorned with prominent spines, had both species represented. *S. sphegea*, 13/7, strikingly black with red legs and the plain brown *S. spinipes,* 8/8. Other species recorded were *Elgiva solicita* 1/8, *Limnia unguicornis* 25/8 and *Coremacera marginata* 19/8, the last with an attractively and densely netted wing pattern. There are also a number of tentatively identified specimens of the genus *Tetanocera* which need to be confirmed.

Many other specimens of these and several other families are gradually being identified for future reference and it is hoped that the communities revealed will help us to interpret the relative values of the many post-industrial habitats offered up by disused quarries such as Whisby Nature Park.

Thanks are due to Richard Davidson who collected the specimens. Identifications were made by me and by various experts associated with the diptera.info website.



A CHECKLIST OF THE NON-MARINE MOLLUSCA OF LINCOLNSHIRE (PART TWO): THE TERRESTRIAL SPECIES

E.J. Redshaw

Introduction

The reader is referred to the review of previous Checklists which was provided in Part One of this Checklist (Redshaw, 2010).

As in Part One, the species' sequence used in *Atlas of the Land and Freshwater Molluscs of Britain and Ireland* (Kerney, 1999) has been followed. Nomenclature follows the latest revision published by Anderson in 2005. Each species' scientific name is followed by its authority and year of publication. As before, where a different nomenclature was used by Carter or Roebuck, or elsewhere in Lincolnshire Naturalists' Union publications, this has been included to aid comparison with earlier articles. Vernacular names are taken from Kerney 1999, except in respect of some species of slugs where there are no vernacular names.

Status Accounts

First known records with location, date and recorder (where known) are given for Vice Counties 53 (South Lincolnshire) and VC 54 (North Lincolnshire). These are followed by a general description of distribution and current status. This is followed by the number of 10km squares that each species has been recorded from during the period 1965 to 2009, out of Lincolnshire's total of 90 10km squares, in the form (20/90). The actual first date and recorder for some species is not available, notably for recent segregates and for one or two of the slug species. In such cases I have indicated their presence in one of the two atlas publications, either Kerney, 1976 or Kerney, 1999. For 10km square maps showing national distribution up to 1996 the reader is referred to Kerney (1999). Records of sub-fossil material from Holocene deposits, principally from the Broughton area, are not included in these accounts.

Species Accounts

Pomatias elegans (Muller, 1774), Round-mouthed snail
Cyclostoma elegans
VC 53: Little Ponton, 1899, R. Worsdale, Dead specimens.
VC 54: Burwell Woods, 1678, M. Lister; Grisel Bottom, Burwell Woods, 19 Sept, 1886, H. Wallis Kew.
A strict calcicole species found only on chalk and limestone areas. The shell is quite thick and can persist for many decades. It is uncertain whether some early records, particularly from VC 53, relate to old empty shells or to sub-fossil material. The only site for live specimens found during the recording period was at Dark Lane, Burwell, 3 Oct 1973, E.J.Redshaw. (1/90). It may still exist at Welton High Woods where several were found live by the late Joan Gibbons in August 1934. The species burrows to hibernate and live specimens are difficult to find during the winter months.

Carychium minimum agg. Muller, 1774, Herald snail
Early records do not differentiate between *C. minimum* and *C. tridentatum* , consequently the following account relates to the aggregate species.
VC 53: Grantham, c.1853, E.J. Lowe.
VC 54: Brigg area, 1864, T. Ball.
A common species found in fens, marshes, water meadows, washlands and moist woods. Also found in dune slacks. (57/90). As a segregate species the 10km square distribution of *C. minimum* is probably similar.

Carychium tridentatum seg. (Risso, 1826) Slender herald snail
VC 53: Careby Wood, 22 May 1976, E.J. Redshaw
VC 54: Twigmoor Woods, 7 September 1974, V. Wilkin
A species found in moist sheltered locations on base-rich soils, such as the Wolds woodlands, but less frequently found in marsh/fen situations than previous species. Also found in much drier locations (27/90).

Succinea putris (L. 1758). Large amber snail
VC53: Grantham, 1900, T. Worsdale
VC 54: Brigg area, 1864, T. Ball
A common species of wetlands, often found on the leaves of iris, sedges and other tall-growing waterside plants, (35/90). Records are based on shells from a variety of sites. Some have been confirmed following dissection of the mollusc. Without dissection only well developed shells can be identified to this species due to the similarity with the next species.

Oxyloma elegans (Risso, 1826) Pfeiffer's amber snail
Succinea elegans, Succinea pfeifferi
VC 53: near Boston, 8 September 1884, W.D. Roebuck
VC 54: Brigg area, 1884, T. Ball
A widespread amber snail found in a variety of damp habitats such as fens, marshes, spring flushes and dune slacks. In Lincolnshire specimens not specifically identified as *S. putris* may, in the past, have been assigned to this species (59/90).

Azeca goodalli (Ferussac, 1821).
Azeca tridens
VC 53: near Bourne, 10 August 1909, Peacock and Stow.
VC 54: Acthorpe Wood, 1 September 1904, C.S. Carter
A rare species in Lincolnshire, found only in old deciduous open woodland on calcareous soils. To be searched for in moss and litter in clearings and ride edges, (4/90)

Cochlicopa lubrica (Muller, 1774) Slippery moss snail
VC53: near Lincoln, 24 May 1894, F.W. Fierke.
VC54: Claxby, near Alford, 16 September 1885, J.E. Mason.
One of the most widely distributed land species. It is found in a variety of damp sheltered places such as woods, hedgerows, rough grassy banks, marshes and old meadows. It occurs in both calcareous and mildly acidic habitats, (88/90).

Cochlicopa lubricella (Rossmassler, 1834) a moss snail
VC53: Baston Fen NR, 6 April 1974, E.J. Redshaw
VC54: Irby in the Marsh, 24 April 1973, E.J. Redshaw
A moss snail, which can occur in the same habitats as the previous species. However it is more likely to be found in drier situations, such as on coastal dunes. Unlike *C. lubrica* it does not occur in mildly acidic habitats, (28/90).

Pyramidula pusilla (Vallot,1801) Rock snail
Pyramidula rupestris
VC53: Great Ponton, 12 July 1902, R. Worsdale.
VC54: Norton Place, near Kirton Lindsey, 1881, J. Beaulah.
A rare species in the county. Since 1970 it has only been recorded from old limestone walls at Carlby and Aunby Warren (VC53); it is now only present at the latter site, (1/90).

Columella edentula (Draparnaud, 1805) Toothless chrysalis snail
VC53: Grimsthorpe, 7 June 1969, L. Lloyd-Evans.
VC54: Broughton Wood, September, 1885, T. Rogers.
Another rare species in Lincolnshire. Found in well-vegetated woods and old grassland, (3/90).

Trucatellina cylindrica (Ferrusac, 1807) Cylindrical whorl snail
VC53: no records
VC54: Skegness, 1888, E. Collier.
Early single records found at Cleethorpes, 1896, and Burton on Stather 'many years ago' (before 1913).
No records since the above.

Vertigo antivertigo (Draparnaud, 1801) Marsh whorl snail
VC53: Thurlby Fen Slipe NR, 27 May 1991, J. Bratton.
VC54: Fishtoft, near Nunn's Bridge, 9 September 1909, W.D. Roebuck.
Rare in the county. An inhabitant of marshes and fens with a stable water table where it occurs in saturated reed and sedge litter, (2/90)

Vertigo substriata (Jeffreys, 1833) Striated whorl snail
VC53: Washingborough, 1913, J.F. Musham.
VC54: Burton on Stather, 'many years ago' before 1913, J. Beaulah. First confirmed record
Saltfleetby-Theddlethorpe NNR, 11 October, 1980, S. Barker.
Rare in the county. Found in marshes and dune slacks, (1/90).

Vertigo pygmaea (Draparnaud, 1801) Common whorl snail
VC53: Little Ponton, 30 July 1902, E.A. Woodruffe-Peacock.
VC54: Brigg area, 1864, T. Ball.
A species of open dry calcareous grassland, verges and old quarries. Also found in dunes and sometimes in marshes. Probably under-recorded in Lincolnshire, (14/90).

Abida secale (Draparnaud, 1801) Large chrysalis snail
Jaminia secale,Pupa secale
VC 53: Grantham, Hall Hills, 1900, R. Worsdale.

VC 54: Raventhorpe, 1911, J. Beaulah.
These are the only verified non-fossil records accepted by the CSGBI. There are no other county records. (0/90)

Pupilla muscorum (L. 1758) Moss chrysalis snail
Jaminia muscorum
VC 53: Great Ponton, 1900, R. Worsdale.
VC 54: Brigg area, 1864, T. Ball.
A locally common species mostly found in dry calcareous grassland, disused quarries and on old coastal dunes. Has also been found in short grassland adjacent to washlands, (31/90).

Lauria cylindracea (da Costa, 1778) Common chrysalis snail
Jaminia cylindracea, Pupa cylindracea
VC 53: Great Ponton, 31 July 1902, W.D. Roebuck.
VC 54: Louth area, 1678, M. Lister; Brigg area, 1864, T. Ball.
The 1678 record was from 'Estrope' which H.W. Kew and W.D. Roebuck interpreted as Hasthorpe near Willoughby, and where the species was refound by them 10 May 1906.
Mainly found in disused quarries, ivy-covered old stone walls and in old woods. Absent from the agricultural Fens and from wet, marshy habitats, (32/90).

Vallonia costata (Muller, 1774) Ribbed grass snail
VC 53: Ancaster, 17 April 1886, W.D. Roebuck.
VC 54: Brigg area, 1864, T. Ball.
Widely distributed on calcareous and alluvial silt soils, in old quarries, dry grassland and open scrub, (67/90).

Vallonia pulchella (Muller, 1774) Smooth grass snail
VC 53: Grantham, 1853, E.J. Lowe.
VC 54: Brigg area, 1864, T.Ball.
Much less common than the other two *Vallonia* species which it tends to replace in marshy habitats, (17/90).

Vallonia cf excentrica Sterki, 1893 Excentric grass snail
VC 53: Donington area, 1969, L. Lloyd Evans.
VC 54: Cleethorpes, 1904, F. Taylor.
V. pulchella and *V. excentrica* treated as one species in LNU 1905 checklist.
A widespread and common species of dry grassland, coastal dunes, and old quarries. It sometimes occurs in marshes, but in these habitats is usually replaced by the previous species, (84/90).

Acanthinula aculeata (Muller, 1774) Prickly snail
VC 53: Grantham, 1902, R. Worsdale.
VC 54: Brigg area, 1864, T. Ball
A rare species found in leaf litter in old deciduous woodland. Most recent records are from the South Kesteven area, with few records from its former sites in the Wolds, (9/90).

Merdigera obscura (Muller, 1774) Lesser bulin
Ena obscura

VC 53: Ancaster, 17 April 1886, R. Worsdale.
VC 54: Brigg area, 1864, T. Ball.
Found in a wide range of shaded habitats including deciduous woodland, scrub, hedgerows and at the base of brick and stone walls. Its distribution is mainly centred on the Wolds and in the South Kesteven area, (25/90).

Punctum pygmaeum (Draparnaud, 1801) Dwarf snail
VC 53: Little Ponton, 12 July 1902, R. Worsdale.
VC 54: Scawby, Sept., 1885, T. Rogers.
This species occurs in a wide range of well-vegetated habitats such as deciduous woods, old grassland, marshes and dune slacks. Most likely to be found in leaf litter, this is another species with its main populations on the Wolds and in South Kesteven, (22/90).

Discus rotundatus (Muller, 1774) Rounded snail
VC 53: Uffington, 1884, E. Collier.
VC 54: Brigg area, 1864, T. Ball.
Widespread and common in moist and sheltered locations. Found in leaf litter and under logs and stones. Recorded from all 10km squares in the county, (90/90).

Arion ater aggregate (L. 1758) Black slug
Includes the *Arion ater* and *Arion rufus* (red slug) segregate species.
VC 53: Little Ponton, 31 July 1902, E.A. Woodruffe-Peacock.
VC 54: Great Cotes, 5 October 1883, W.E. Clarke.
A widespread and common species occurring in all sorts of habitats. Probably occurs in all 10km squares (89/90).

Arion vulgaris Moquin-Tandon, 1855 'Lusitanian' slug
Arion lusitanicus
VC 53: No records.
VC 54: Alford, October 2005, C. du Feu.
Probably an introduced species; first recorded in Britain in 1954. Found in disturbed locations such as gardens and general waste ground, (1/90)

Arion flagellus Collinge, 1893. Durham slug
VC 53: No records.
VC 54: Walesby, 19 November 2000, C. du Feu
Found in damp sheltered locations including gardens and waste ground, (2/90).

Arion subfuscus Draparnaud, 1805 Dusky slug
VC 53: Fulbeck Grange, December 1888, J.B. Davy.
VC 54: Maltby Wood, 24 April 1886, H.W. Kew.
Found in woodlands and gardens, and on waste land including rubbishy roadside verges.
A widespread species that is probably under-recorded, (32/90).

Arion circumscriptus aggregate Bourguignat's slug
A. fasciatus
Includes *A. circumscriptus* seg. *A. fasciatus* and *A. silvaticus.*
Early records predate the mid 1960s determination of the segregate species.
VC 53: Ancaster, 17 April 1886, W.D. Roebuck.

VC 54: Skirbeck, 8 September 1884, W.D. Roebuck.
A widespread and common species found under timber, stones or rubbish in woods, scrub and gardens, (88/90).

Arion circumscriptus seg. Johnston 1828 (a slug)
VC 53: Walcot, 1 May 1971, E.J. Redshaw.
VC 54: Fishtoft, 11 April 1972, E.J. Redshaw.
Habitats as stated under the aggregate species. Almost certainly under-recorded, (28/90).

Arion silvaticus Lomander, 1937 (a slug)
VC 53: In 1976 Atlas, first date not available
VC 54: North Elkington, 15 June 1975, E.J. Redshaw
Habitats as stated under the aggregate species, but possibly more associated with woodland than its congeners. Almost certainly under-recorded, (21/90).

Arion fasciatus (Nilsson, 1923 (a slug)
VC 53: Baston Fen, 15 July 1970, E.J. Redshaw.
VC 54: Saltfleetby NNR, 26 June 1974, E.J. Redshaw.
Habitats as stated under the aggregate species. Almost certainly under-recorded, (30/90).

Arion hortensis aggregate Garden slug
Includes and *A. hortensis seg.* and *A. distinctus*
VC 53: Ancaster, April 1889, W.D.Roebuck.
VC 54: Rigsby Farm, Alford, 4 April 1886, W.D. Roebuck.
Common and widely distributed as a garden and agricultural pest, found among herbage, ground litter and in disturbed habitats, (86/90).

Arion hortensis seg. Ferussac, 1819 (a slug)
VC 53: Colsterworth, 24 March 1998, C. du Feu
VC 54: Gainsborough, 11 March 1997, C. du Feu.
Habitats as stated under the aggregate species. Probably under-recorded, (6/90)

Arion distinctus Mabille, 1868 (a slug)
VC 53: Spalding, 9 March 1997, C. du Feu
VC 54: Gainsborough, 6 May 1997, C. du Feu
The most common segregate of this group, though under-recorded since separation. Habitats as stated under the aggregate species, but also found in natural sites, (20/90).

Arion intermedius Normand, 1852 Hedgehog slug
VC 53: Little Ponton, 31 July 1903, W.D. Roebuck.
VC 54: Farlesthorpe, 25 May 1887, J.E. Mason.
A common and widespread species that occurs in a wide range of natural habitats, though not often found in gardens, (87/90).

Vitrina pellucida (Muller, 1774) Pellucid glass snail
VC 53: Anwick near Sleaford, 7 March 1887, C.T. Musson
VC 54: Brigg area, 1864, T. Ball.

Widespread in the county. Occurs in a variety of habitats, from deciduous woodlands, old grassland and open scrub to mature coastal dunes and waste ground. (82/90).

Vitrea crystallina agg. (Muller, 1774) Crystal snail
Early records include *V. contracta*
VC 53: Grantham, 1900, R. Worsdale.
VC 54: Brigg area, 1864, T. Ball.
Widespread in the county. Found in all sorts of moist habitats, including coniferous and deciduous woodlands, grassland, disused grassy quarries and in marshes, (87/90).

Vitrea crystallina seg. (Muller, 1774)
No separate first records available.
Distribution probably the same as for the aggregate group.

Vitrea contracta (Westerlund, 1871) Milk crystal snail
VC 53: Horbling, 28 February 1972, E.J. Redshaw.
VC 54: Freiston, 11 April 1972, E.J. Redshaw.
Widespread and common. Habitats as stated under the aggregate heading, but can occupy drier habits than *V. crystallina* seg. (67/90).

Nesovitrea hammonis (Strom, 1765) Rayed glass snail
Vitrea radiatula, Hyalina radiatula, Retinella radiatula
VC 53: Great Ponton, 31 July 1902, W.D. Roebuck.
VC 54: Brigg area, 1864, T. Ball.
Local in coniferous and deciduous woodlands, wet or dry grasslands and fens, (43/90).

Aegopinella pura (Alder, 1830). Clear (or delicate) glass snail
Vitrea pura, Hyalina pura, Retinella pura
VC 53: Great Ponton, 30 August 1902, R. Worsdale.
VC 54: Brigg area, 1864, T. Ball.
A local species of leaf litter in moist deciduous woodlands, (39/90).

Aegopinella nitidula (Draparnaud, 1805) Dull (or smooth) glass snail
Vitrea nitidula, Hyalina nitidula, Retinella nitidula
VC 53: Uffington, October 1885, E. Collier.
VC 54: Brigg area, 1864, T. Ball.
Widespread and common. Found in a wide variety of natural sheltered habits including gardens and waste land. (88/90).

Oxychilus draparnaudi (Beck, 1837) Draparnaud's glass snail
Vitrea lucida, Hyalina lucida
VC 53: Walcot, 1 May 1971, E.J. Redshaw.
VC 54: Alford, 14 July 1900, C.S. Carter.
A very local species of litter in large gardens, urban waste ground and roadside rubbish. (19/90).

Oxychilus cellarius (Muller, 1774) Cellar snail
Vitrea cellaria
VC 53: Uffington, 1884, E. Collier.
VC 54: Brigg area, 1864, T. Ball.
Widespread and common. Found in gardens and waste ground under stones, rotting timber and rubbish, (88/90).

Oxychilus alliarius (Miller, 1822) Garlic snail
Vitrea alliaria
VC 53: Great Ponton, 29 June 1902, R. Worsdale.
VC 54: Sutton (on Sea?) 16 April 1887, H.W. Kew.
Widespread and common. Found in moist situations in woods, scrub, hedgerows and waste ground. One of the few species which can be found in acidic woodlands , (78/90).

Oxychilus navarricus (Bourguignat, 1870) Glossy (or Swiss) glass snail
Vitrea rogersi, O. helveticus
VC 53: Court Leys, November 1901, Miss C. Stow.
VC 54: Haugham Woods, 15 April 1886, W.D. Roebuck.
Widespread and common. Found in similar situation to the previous species, but also frequent in gardens under rubbish, (59/90).

Zonitoides excavatus (Alder, 1830) Hollowed glass snail
VC 53: No records
VC 54: Woodhall Spa, 7 August 1893, F.W. Fierke.
An extremely local species which avoids habitats on base-rich soils. It occurs in deciduous woodland on acid soils near Woodhall Spa- Kirkby on Bain, and near Market Rasen, (6/90).

Zonitoides nitidus (Muller, 1774) Shiny glass snail
VC 53: Little Ponton, 12 July 1902, R. Worsdale.
VC 54: Brigg area, 1864, T. Ball.
Widespread and common. Found in marginal vegetation and litter alongside lakes, reservoirs, rivers, streams and fenland drains. Withstands seasonal flooding, (53/90).

Milax gagates (Draparnaud, 1801) Jet slug
VC 53: Bourne, 10 August 1909, LNU field meeting.
VC 54: Alford, 16 May 1886, J.E. Mason
A very localised distribution. Found mainly in gardens and on waste ground, (8/90).

Tandonia sowerbyi (Ferussac, 1823) Keeled (or Sowerby's) slug
Milax sowerbyi
VC 53: Crowland, 28 June 1910, W.D. Roebuck & J.F. Musham.
VC 54: Louth, 21 May 1886, H.W. Kew.
Locally distributed in gardens, churchyards, roadside rubbish and field margins, (20/90).

Tandonia budapestensis (Hazay, 1881) Budapest slug
Milax budapestensis
VC 53: Welby, 18 November 1967, G.W. Pitchford.
VC 54: Lincoln, 2 October 1962, H.W. Walden.
A common pest species found in gardens, waste ground and ploughed fields. Probably under-recorded. (38/90).

Boettgerilla pallens Simroth 1912 Worm slug
VC 53: Blankney Fen, 29 May 1993, A.S. Lazenby
VC 54: Gainsborough, 1999, C. du Feu.
A scarce, but probably under-recorded, species of gardens and waste ground. Usually found under stones and old bricks on moist soil, (6/90).

Limax maximus L. 1758 Great grey (or tiger) slug
VC 53: Boston, 8 September 1884, W.D. Roebuck.
VC 54: Well Vale, 14 April 1886, W.D. Roebuck.
A widely distributed species. Found in old woodland, large unkempt gardens, farmyards and undisturbed waste ground, usually under logs or bark in sheltered situations, (59/90).

Limax cinereoniger Wolf 1803 Ash-black slug
VC 53: Careby Wood, 9 June 1903, E.A. Woodruffe-Peacock.
VC 54: Broughton Woods, c.1905, E.A. Woodruffe-Peacock.
Extinct in the county? There have been no records during the period under review.

Limax flavus L. 1758 Yellow slug
VC 53: Caythorpe, 5 March 1902, Miss C. Stow.
VC 54: Louth, 24 April 1886, H.W. Kew.
A very local species that is probably under-recorded. Found in association with man in gardens, cellars, outhouses, farmyards and occasionally in woods, (15/90).

Limax maculatus (Kaleniczenko,1851)
VC 53: Not recorded.
VC 54: Sturton by Stow, 28 April 1997, C. du Feu.
Essentially an Irish species where it is common. In Britain it has been found under human rubbish by roadsides and in farmyards, probably under-recorded. (1/90)

Lehmannia marginata Muller, 1774 Tree slug
Limax marginatus
VC 53: Careby Wood, June 1903, E.A. Woodruffe-Peacock.
VC 54: Louth, October 1885, R.W. Goulding.
A very local species of old woodland where it grazes on algae. (14/90).

Lehmannia valentiana (Ferrusac, 1821) Greenhouse slug
VC 53: Weston, 31 May 2000, C. du Feu.
VC 54: Gainsborough, 2 December 1997, P. Wain & C. du Feu.
A rare species in the county, found in gardens and nurseries, (4/90).

Deroceras leave (Muller, 1774) Marsh slug
VC 53: Fulbeck, 26 December 1888, J. B. Davy.
VC 54: Muckton, 15 April 1886, W.D. Roebuck.
A widespread species of wetlands. Found in marginal vegetation alongside waterways, and in marshy grassland, (55/90).

Deroceras reticulatum (Muller, 1774) Field (or milky) slug
Agriolimax agrestis, A. reticulatus
VC 53: Boston, 8 September 1884, W.D. Roebuck.
VC 54: Louth area, 1678, M. Lister; Great Cotes, 5 October 1883, W. E. Clarke.
Widespread and common. Everywhere, in arable fields, grassland, waste land and gardens. Probably in all 10km squares, (89/90).

Deroceras panormitanum (Lessona & Pollonera, 1882) Caruana's slug
D. caruanae
VC 53: TF42 (Sutton Bridge area), in 1976 Atlas, M.J. Bishop.
VC 54: First date not known, but after 1976. Present in 1999 Atlas.
Locally distributed in gardens, roadside rubbish and farmyards, (18/90).

Euconulus fulvus agg. (Muller, 1774) Tawny glass snail
Records prior to 1990 include *E. alderi*
VC 53: Lincoln, 24 May 1894, F.W. Fierke.
VC 54: Burwell Woods, 1678, M. Lister; Burwell Woods, 1887, H.W. Kew.
Widespread in litter in moist sheltered woodlands and hedgerows. Appears to avoid the Fenland areas, (54/90).

Euconulus alderi (Gray, 1840)
VC 53: No records.
VC 54: Saltfleetby-Theddlethorpe NNR, 15 July 1988, A Fowldes.
Rare. Found in dunes slacks at the above site and at Gibraltar Point NNR, (2/90).

Cecilioides acicula (Muller, 1774) Blind snail
VC 53: Little Ponton, 30 July 1902, F.H. Woolward.
VC54: Lincoln, 18 January 1898, J.H. Cooke.
Locally distributed. This is a subterranean species of stony calcareous soils, mainly occurring in South Kesteven and on The Wolds. Its presence in the Fens, in some instances, may be due to finds of fresh material in archaeological excavations, or from old burial grounds, (22/90).

Cochlodina laminata (Montagu, 1803) Plaited door snail
Clausilia laminata, Marpessa laminata
VC 53: Uffington, 1885, E. Collier.
VC 54: Brigg area, 1864, T.Ball.
Common in the Wolds and South Kesteven areas. Absent from the Fens. Found in deciduous woodland and overgrown quarries in leaf litter and on fallen timber, 35/90).

Macrogasta rolphii (Turton, 1826) Rolph's door snail
Clausilia rolphii
VC 53: Ropsley Rise, 27 December 1902, R. Worsdale.
VC 54: Haugham Pasture and Burwell Woods, 13 May 1887, H.W. Kew.

Rare. Known from only two sites in VC 53 and one site in VC 54. Found among moss and nettles in a small disused quarry under beech, and in hazel coppice. No records since 1972, (3/90).

Clausilia bidentata (Strom,1765) Common (or two-toothed) door snail
C. rugosa
VC 53: Uffington, 1885, E. Collier.
VC 54: Brigg area, 1864, T. Ball.
Common in the Wolds and South Kesteven areas. Absent from the Fens. Found in deciduous woodland in ground litter, on standing and fallen timber, under mature hedgerows and on old limestone walls, (34/90).

Balea perversa (L. , 1758) Tree snail
VC 53: Grantham, 30 July 1902, R. Worsdale.
VC 54: Louth, before 1886, H.W. Kew.
Rare. In last thirty years known only from the Carlby-Aunby area. Found on old limestone walls shaded by deciduous woodland or ivy, (2/90).

Testacella haleotidia Draparnaud, 1801 Shelled slug
VC 53: No records.
VC 54: Gainsborough, 22 April 1898, F.M. Burton.
Rare. A carnivorous subterranean species restricted to gardens, nurseries and allotments. Found in the garden of Highfield House, Gainsborough in 1898, and not recorded again until 1998, from the same garden, by C. du Feu, (1/90).

Testacella scutulum Sowerby, 1821. Shelled slug
VC 53: Grantham, 30 March 1920, Miss C. Stow.
VC 54: Nettleton, 28 January 1903, Miss S. Allett.
A record for 1897 from High Park Gardens, Stamford is in Cambridgeshire.
Rare. Another carnivorous, subterranean species; both of which feed on earthworms. Also found in gardens. Only recent record is from Alford where six specimens were found in a garden on 14 October 1999, (1/90).

Candidula intersecta (Poiret, 1801) Wrinkled snail
Helicella caperata
VC 53: Ancaster, 17 April 1886, W.D. Roebuck.
VC 54: Brigg area, 1864 T. Ball.
A widespread and common species, though absent from some large peatland and heathland areas of the county. Found on base-rich soils in grasslands, river and sea banks and mature coastal dunes, (48/90).

Candidula gigaxi (L. Pfeiffer, 1850)
Helicella heripensis, H. Gigaxi
VC 53: Grantham, September 1909, J. Hawkins.
VC 54: Goulceby, 1900, C.S. Carter.
A local species found on short turf in calcareous grassland and in disused quarries. Has also been found on silt-soil river banks in the Fens, (11/90).

Cernuella virgata (da Costa, 1778) Striped snail
Helicella virgata
VC 53: Boston, 8 September 1884, W.D. Roebuck.

VC 54: Brigg area, 1864, T. Ball.
A widespread and common species of calcareous soils, absent from the south Lincolnshire peatlands. Found in areas containing a mix of short turf and medium height herbage, where in dry weather it will ascend the taller vegetation, (48/90).

Helicella itala (L. 1758) Heath snail
VC 53: 7 April, 1886, W.D. Roebuck.
VC 54: Brigg area, 1864, T. Ball.
Local and appears to be declining. Mainly found on short calcareous grassland and in disused quarries, predominantly in the Wolds. Has also occurred on mature coastal dunes, and one isolated site in the Fens on a silty river bank, (25/90).

Monacha cantiana (Montagu, 1803) Kentish snail
Helicella cantiana
VC 53: Honington, 1875, J. Hawkins.
VC 54: Brigg area, 1864, T. Ball.
Widespread and common. Typically found among nettles, umbellifers and other tall herbage on waste ground, field margins, embankments and open scrub. Probably occurs in all 10km squares, (84/90).

Ashfordia granulata (Alder, 1830) Silky snail
Hygromia granulata, Monacha granulate
VC 53: Ancaster, 17 April 1886, W.D. Roebuck.
VC 54: Winteringham, 18 November 1973, J. Bratton.
Rare. Restricted to marshy ground in river valleys. Only recent record is from the Winteringham Beck valley, (1/90).

Zenobiella subrufescens (Bellamy, 1838) Brown snail
H. fusca
VC 53: Washingborough, 1912, J.F. Musham.
VC 54: No Records.
The above is the only record.

Hygromia cinctella (Draparnaud, 1801) Girdled snail
VC 53: No records.
VC 54: Market Rasen, 22 September 2004, C. Smith
Rare. In 1999 only known from southern England. The species rapidly extended its range, probably due to movement of nursery plants. Found under beech hedging in Market Rasen, (1/90).

Trochulus striolatus (C. Pfeiffer, 1823) Strawberry snail
Hygromia rufescens, H. striolata, Trichia striolata
VC 53: Grantham, 1900, R. Worsdale.
VC 54: Brigg area, 1864, T. Ball
Widespread and common. Found on waste ground, woodland margins, hedgerows, boundary walls, and particularly in gardens, (88/90).

Trochulus sericeus (Draparnaud, 1801) a hairy snail
Hygromia liberta, Trichia liberta, T. plebeia
VC 53: Barkston, 26 March 1970, P.J. Wilson.

VC 54: Winceby, 22 January 1972, E.J. Redshaw.
Locally distributed. Found on roadside verges and along hedgerows, (36/90).

Trochulus hispidus (L., 1758) Hairy snail
Hygromia hispida, Trichia hispida
VC 53: Ancaster, 1886, W.D. Roebuck.
VC 54: Brigg area, 1864, T. Ball.
Widespread and common. Found in ground litter along woodland margins, under hedgerows, roadside verges and on waste ground. Not found in gardens,(89/90)

Arianta arbustorum (L., 1758) Copse snail
VC 53: Uffington, 1885, E. Collier.
VC 54: Louth area, 1678, M. Lister; Brigg area, 1864, T. Ball.
Widespread and common. Found in a variety of sheltered habitats, such as hedgerows, woodlands and scrub, among tall herbage, (81/90).

Helicigona lapicida (L. 1758) Lapidary snail
VC 53: Uffington, 1885, E. Collier.
VC 54: 'Many places in the county', 1674, M. Lister; Well Vale, 1890, J.B. Davy.
Rare. Formerly locally distributed on limestone walls and had been found on beech trees nearby. Now restricted to old limestone walls in the south west of the county, (2/90).

Cepaea nemoralis (L. 1758) Brown-lipped snail
Helix nemoralis
VC 53: Grantham, 1853, E.J. Lowe.
VC 54: Louth area, 1674, M. Lister; Brigg area, 1864, T. Ball.
Widespread and common. Found in a variety of moist habitats such as woods, scrub, waste ground and disused quarries. Even found on dry grassland where it will climb isolated tall herbage, (89/90).

Cepaea hortensis (Muller, 1774) White-lipped snail
Helix hortensis
VC 53: Crowland, 1858, Bellars.
VC 54: Haugham Pasture, 7 June 1886, H.W. Kew.
Found in similar situations to the previous species, though does not appear to be so widespread, (52/90).

Cornu aspersum Muller, 1774 Garden snail
Helix aspersa
VC 53: Grantham, 1853, E.J. Lowe.
VC 54: Louth area, 1678, M. Lister; Brigg area, 1864, T. Ball.
Widespread and common. Found in sheltered situations on waste ground, roadside verges, hedgerows, disused quarries and gardens. Also occurs in open woodland and scrub, (88/90).

Helix pomatia L., 1758 Roman (or edible) snail
VC 53: No records.
VC 54: Great Limber, April, 1974, V. Wilkin.

Rare. Lincolnshire is outside the range of this southern species. However specimens were introduced from Sussex into a quarry about 1950 and survived into the 1980s before the quarry was infilled with rubbish, (1/90).

Acknowledgements (Parts 1 & 2)

I am grateful for assistance received from Dr M.P. Kerney during his time as National Non-Marine Recorder for the Conchological Society of Britain and Ireland (CSGBI). Details Dr Kerney provided from the Society's records, including the Taylor and Roebuck manuscripts, helped considerably with first records and expanded information found in Lincolnshire sources and in the author's diaries. Assistance has also been received from A. Norris, the current Recorder. This checklist would not have been possible without the help of the many people who have contributed to the recent (post-1965) mollusc records of the county. In particular I must mention Mrs V. Wilkin, C. Smith, and the late P.J. Wilson who provided extensive lists and specimens for identification and R. Chadd who provided Environment Agency lists and specimens for determination. To conclude I must express my gratitude to C. du Feu. Without his slug identification skills and survey work this checklist would have been far from complete.

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THE BEES (HYMENOPTERA: ACULEATA) OF WATSONIAN LINCOLNSHIRE. SOCIAL BEES (*BOMBUS* and *APIS*)

Michael Archer

This is the sixth and last paper, on the bees of Lincolnshire and deals with the social species of the family Apidae. Introductions to these bees are given by Prys-Jones and Corbet (1987), Benton (2006) and Edwards and Jenner (2009), while Pinchen (2006) also may be found to be useful. The current major sources of species information are the Provisional Atlases of the Bees, Wasps and Ants Recording Society (BWARS). These provide a national distribution map and detailed natural history information for each species of *Bombus*. Reference is made to the relevant Atlas as each species is considered.

This paper considers 21 species of bumblebees and the honeybee, although now five bumblebee species are extinct in Lincolnshire. On the bright side, *B. hypnorum* is a relatively new species to the county and *B. rupestris* has recently been recorded again, probably having had a period of extinction. Because of the large number of records, the distributions of twelve species are represented by dot maps at the 10km square level. Records previous to 1900 are represented by "X", from 1900 to 1979 by an open circle and from 1980 by a black circle. The 1980 division has been chosen since there are no or very few records between 1941 and 1979.

The year of some of the records of M.W. Graham are not known so are given as 1941, the year in which these records were published. The records of C.F. George are given as pre-1889 and have been entered as 1888.

Genus **Bombus** Latreille, 1809

The bumble bees have an annual life-cycle. Queen bumble bees overwinter in subterranean burrows, in leaf litter or under bark. In the spring, according to the species, the queen initiates a nest either underground usually in an abandoned small mammal burrow or at the surface of the ground under dry leaf litter. The queen makes a space in the nesting material of the small mammal or in the leaf litter and then builds a honey pot from wax secreted from her gastral sterna. She fills the honey pot with regurgitated nectar. Some eggs are then laid on a mass of pollen which is surrounded by a wax cell. The queen incubates the cell by lying across it. The larvae are progressively fed on a pollen-nectar mixture, the wax cell being gradually enlarged to accommodate the growing larvae. The first adults are workers which build further cells and forage for food. Some species, called pocket-makers, build wax pockets near the base of the wax cell into which the foragers deposit their loads of pollen to feed the larvae. In other species, called pollen-storers, the foraged pollen is stored in empty pupal cocoons or specially built wax cylinders. The diet is supplemented by a pollen-nectar mixture regurgitated to the larvae through a small hole in the cell. Further wax cells make an irregular-shaped nest. At pupation the larvae spin a silken cocoon. The wax from the cell is then removed and used to build further cells. Later in the season males and new queens are reared. Mating occurs away from the nest. With the death of the workers, the colony comes to an end. Several species are social parasites; the cuckoo queen enters the colony of its host, kills the queen and uses the workers to rear new cuckoo queens and males. No cuckoo workers are reared. Queens of non-cuckoo bumble bee species also usurp colonies of the same, or different, species.

The large, hairy bumble bees are eusocial, except for subgenus *Psithyrus*, which are social parasites on other bumble bees. The hair is usually black with yellow, red, white or tawny bands. Pollen is carried in the corbicula on the hind legs. Usually polylectic for pollen sources. *B. jonellus* is associated with heaths and moors. Colonies vary from small (30-50 workers) to large (200 or more workers). Usually one generation a year with the fertilised queen overwintering. *B. pratorum, B. jonellus* and *B. hortorum* may have two generations a year. Parasitized by *Mutilla europaea*. Nationally: 25 species.

Bombus distinguendus Morawitz, 1869. Edwards & Telfer, 2001. Extinct. 3 records. Kirton-in-Lindsey (SK99), 1888, G.F. George; Woodhall Spa (TF16), Old Bolingbroke (TF36), 1941, M.W. Graham.

Bombus hortorum (Linnaeus, 1761). Edwards & Roy, 2009. Common and widespread. 29 10km squares.

Bombus humilis Illiger, 1806. Edwards & Telfer, 2002. Extinct. 3 records. Woodall Spa (TF16), 1941, M.W. Graham; Hameringham (TF36), 1936, H.P. Jones; Old Bolingbroke (TF36), 1941, M.W. Graham.

Bombus hypnorum (Linnaeus, 1758). Edwards & Roy, 2009. A recent new species (from 2008) for Lincolnshire. 8 10km squares.

Bombus jonellus (Kirby, 1802). Edwards & Broad, 2006. 2 records. Messingham Sand Quarry (SE90), 2001, M.E. Archer; Old Bolingbroke (TF36), 1941, M.W. Graham.

Bombus lapidarius (Linnaeus, 1758). Edwards & Broad, 2005, Common and widespread. 34 10km squares.

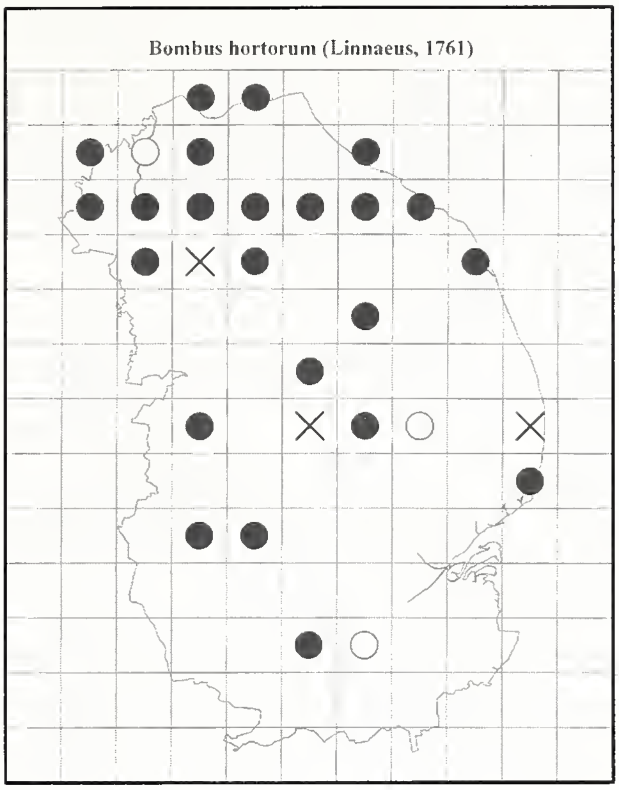
Bombus lucorum (Linnaeus, 1761). Edwards & Roy, 2009. Common and widespread. 32 10km squares.

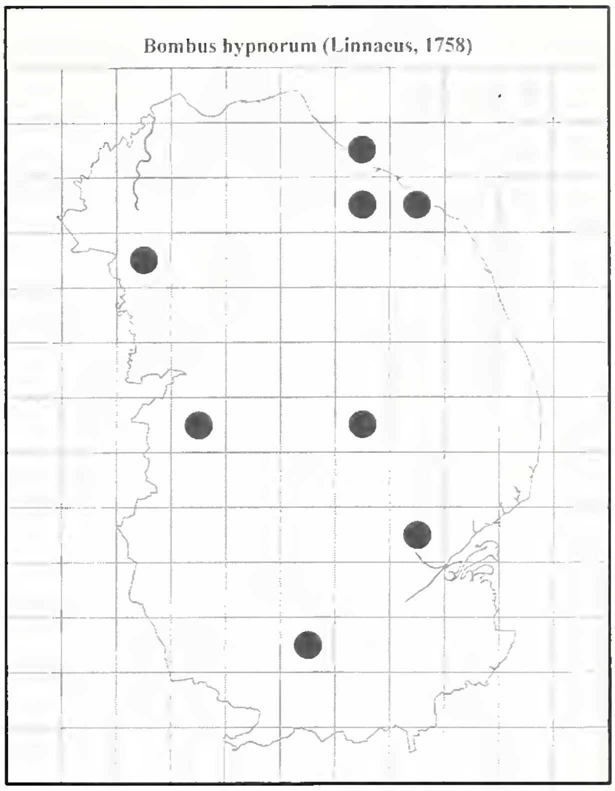
Bombus muscorum (Linnaeus, 1758), Edwards & Broad, 2005. 4 records. Kirton-in-Lindsey (SK99), 1888, C.F. George; Old Bolingbroke (TF36), 1941, M.W. Graham; Saltfleetby-Theddlethorpe dunes (TF49), 1984, Gibraltar Point (TF55), 1996, M.E. Archer.

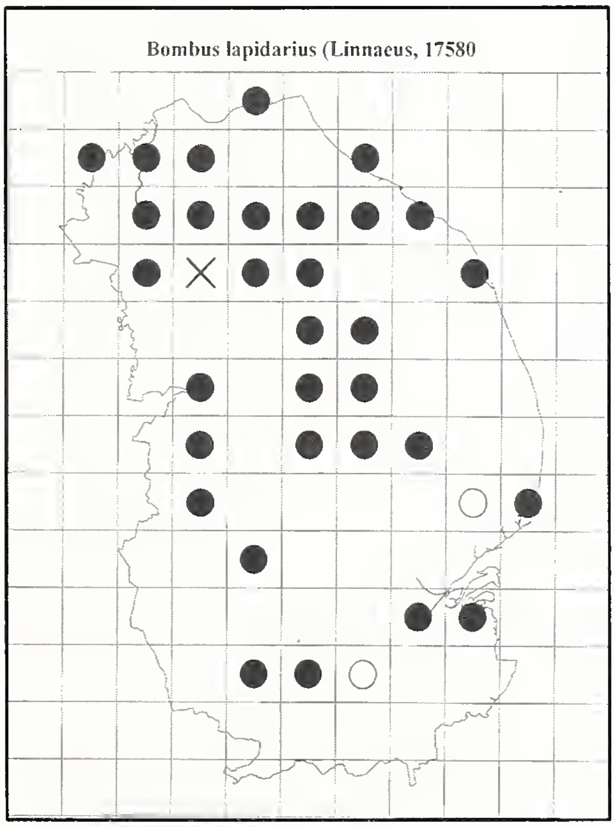
Bombus pascuorum (Scopoli, 1763). Edwards & Broad, 2005. Common and widespread. 37 10km squares.

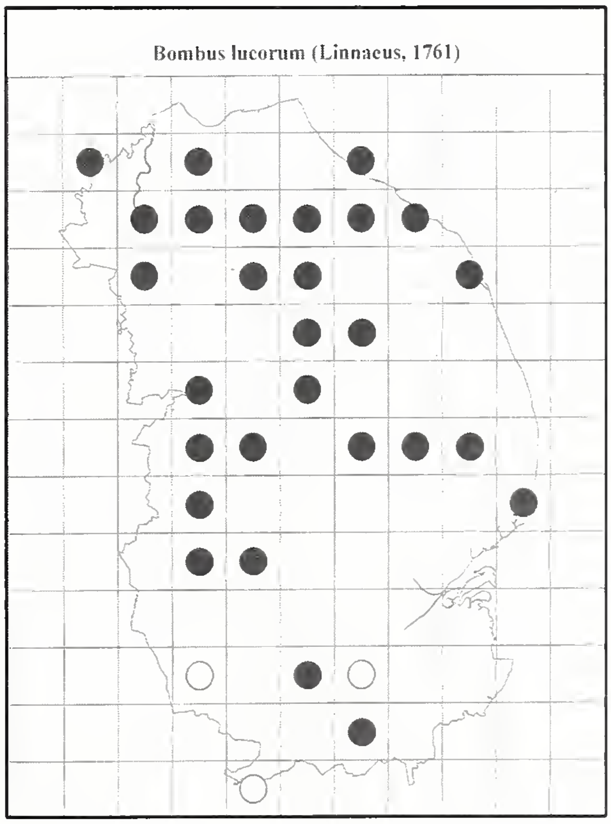
Bombus pratorum (Linnaeus, 1 761). Edwards & Broad, 2006. Common and widespread. 19 10km squares.

Bombus ruderarius (Müller, 1776). Edwards & Telfer, 2001. Extinct. 2 records. Hameringham (TF36), 1936, H.P. Jones; Old Bolingbroke (TF36), 1941, M.W. Graham.

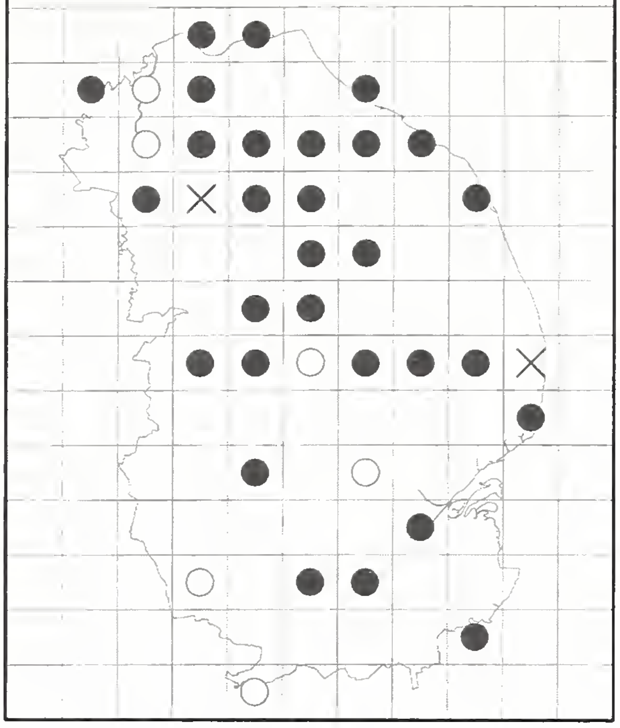

Bombus hortorum (Linnaeus, 1761)


Bombus hypnorum (Linnaeus, 1758)

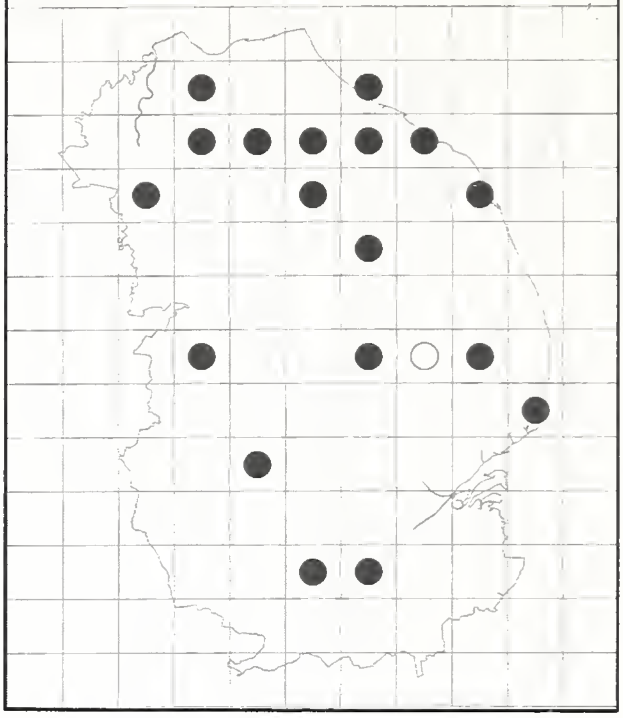

Bombus lapidarius (Linnaeus, 17580


Bombus lucorum (Linnaeus, 1761)

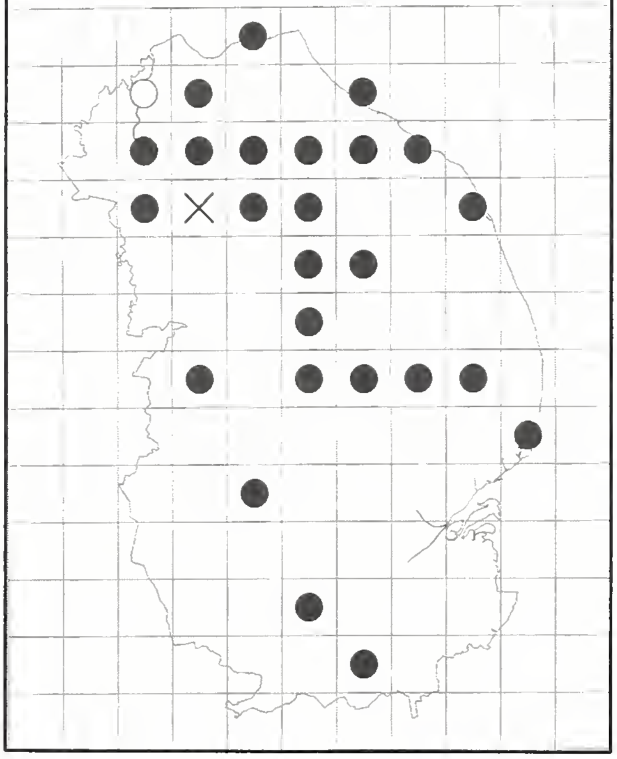
Bombus pascuorum (Scopoli, 1763)



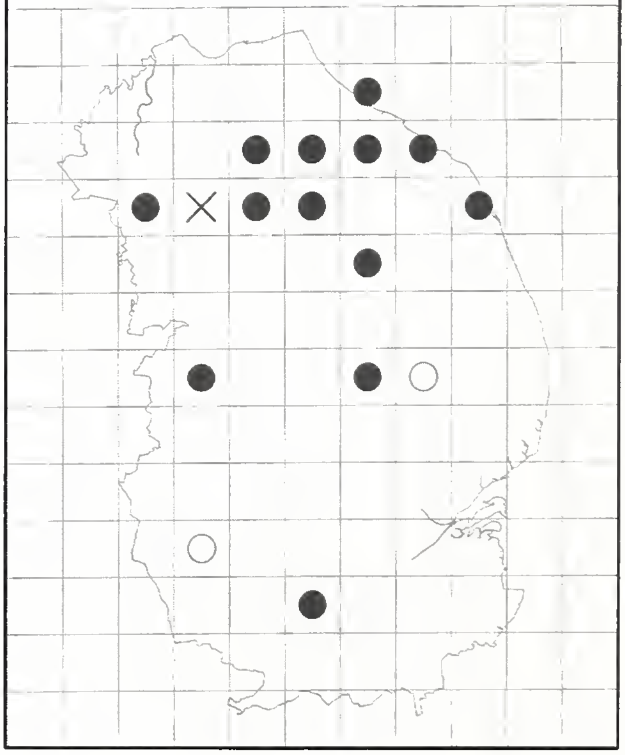
Bombus pratorum (Linnaeus, 1761)



Bombus terrestris (Linnaeus, 1758)



Bombus rupestris (Fabricius, 1793)



Bombus ruderatus (Fabricius, 1775). Edwards & Roy, 2009. 6 record. Hammeringham (TF36). 1936, H.P. Jomes; Spilsby (?) (TF46), 1940. M.W. Graham; Old Bolingbroke (TF36), 1941, M.W. Graham; Mill Green House (TF22), 1970, L. Packer; Gosberton Clough (TF12), 2005, 2006, L. Hebden; Cowbit (TF21), 2007, P. Saunders; Willow Tree Fen (TF12), 2010, A.L. Phillips & L. Hebden.

Bombus subterraneus (Linnaeus, 1758). Edwards & Telfer, 2002. Extinct. 4 records. Kirton-in-Lindsey (SK99), 1888, C.F. George; Woodhall Spa (TF16), 1921, Morton; Old Bolingbroke (TF36), 1941, M.W. Graham; Little Holland, 1917, C.H.H., this specimen was found in Keighley Museum by M.E. Archer.

Bombus sylvarum (Linnaeus, 1761). Edwards & Telfer, 2001. Extinct. 3 records. Hameringham (TF36), 1936, H.P. Jones; Old Bolingbroke (TF36), 1941, M.W. Graham; Spilsby (TF46),1941, Graham, M.W..

Bombus terrestris (Linnaeus, 1758). Edwards & Telfer, 2009. Common and widespread. 27 10km squares.

Bombus barbutellus (Kirby, 1802). Edwards & Broad, 2006). Cuckoo bumblebee on *Bombus hortorum*. 7 records. Irby Dales (TA10), 2008, 2010, Bradley Wood (TA20), 2008, Dixon Wood (TA20), 2009, A,L, Phillips; Hameringham (TF36), 1936, H.P. Jones; Old Bolingbroke (TF36), M.W. Graham; Kingerby Beck Meadows (TF09), 2010, A.L. Phillips.

Bombus bohemicus (Seidl, 1837). Edwards & Broad, 2005. Cuckoo bumblebee on *Bombus lucorum*. Common and widespread. 16 10km squares.

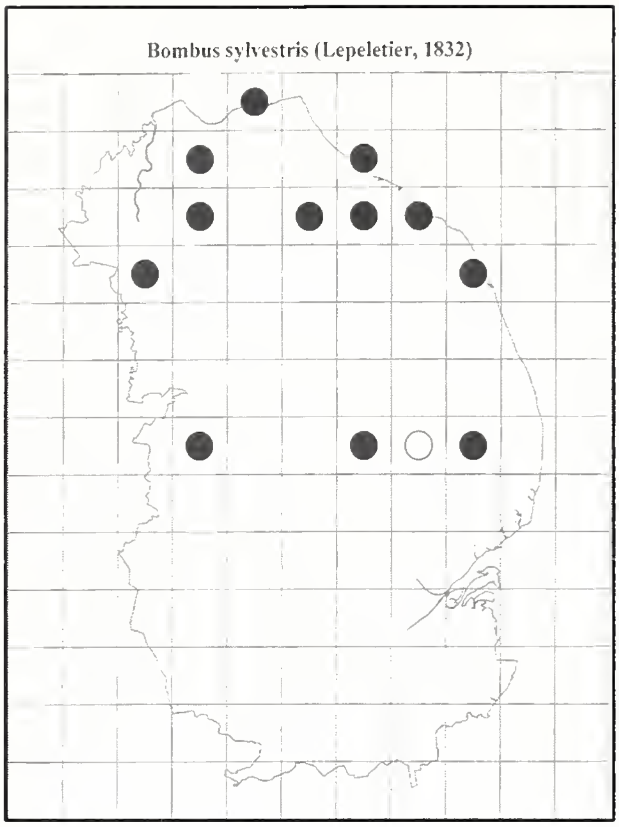
Bombus campestris (Panzer, 1801). Edwards & Broad, 2006. Cuckoo bumblebee on *Bombus pascuorum*. 5 records. Old Bolingbroke (TF36), 1941, M.W. Graham; Hameringham (TF36), 1936, H.P. Jones; Mill Green House (TF22), 1970, L Packer; Gosberton Clough (TF12), 2005, L. Hebden; Laughton Forest (SK89), 2009, A.L. Phillips.

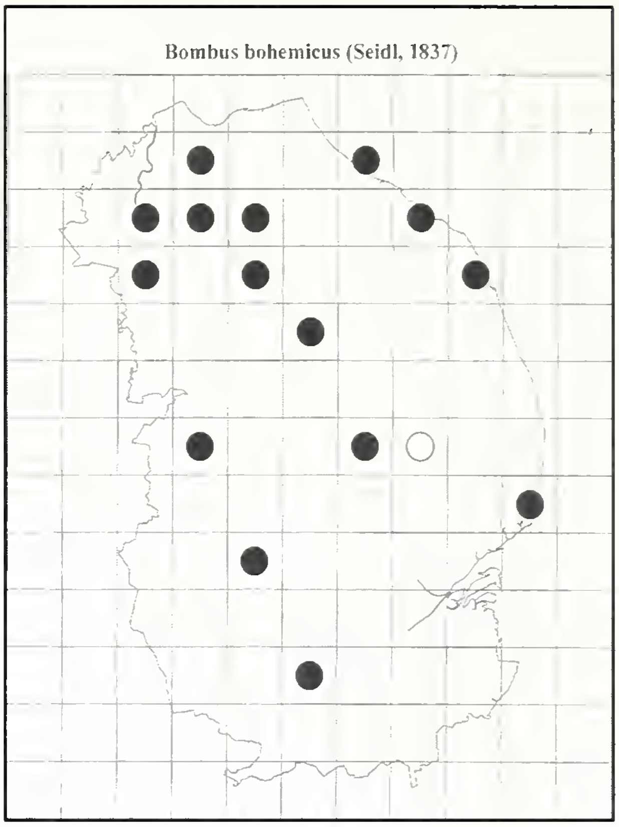
Bombus rupestris (Fabricius, 1793). Edwards & Telfer, 2001. After a probable period of extinction, it has reappeared from 2007. Cuckoo bumblebee on *Bombus lapidarius*. 16 10km squares.

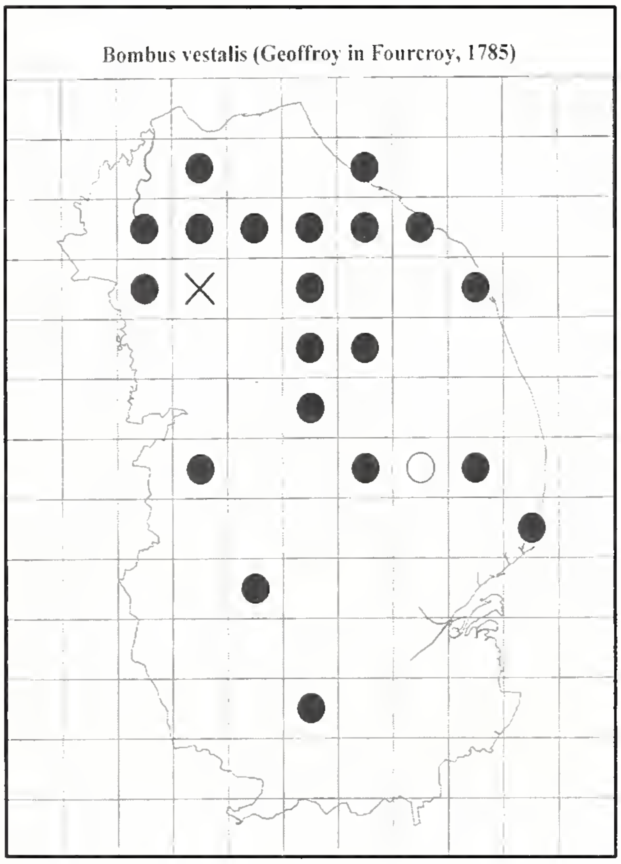
Bombus sylvestris (Lepeletier, 1832). Edwards & Telfer, 2001. Cuckoo bumblebee on *Bombus pratorum*. 13 10km squares.

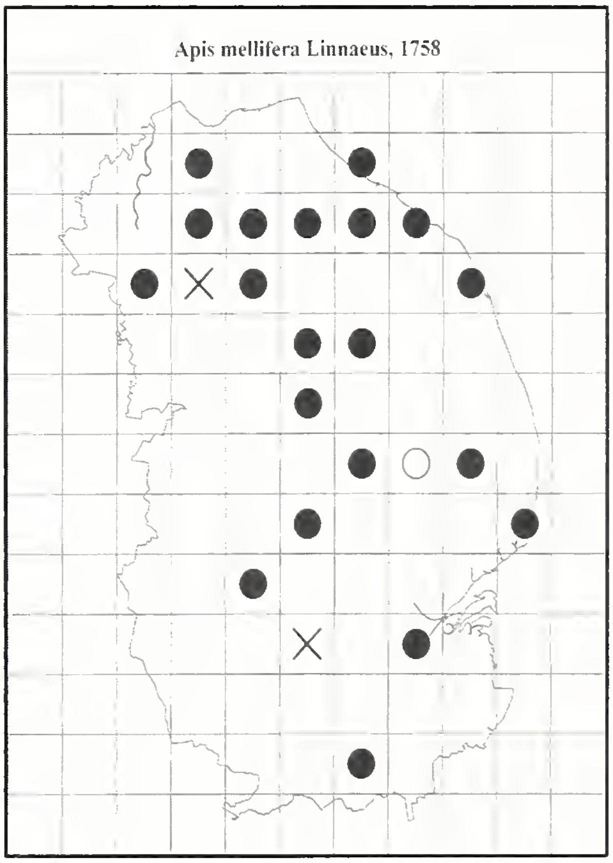
Bombus vestalis (Geoffroy *in* Fourcroy, 1785). Edwards & Broad, 2005. Cuckoo bumblebee on *Bombus terrestris*. Common and widespread. 22 10km squares.

Genus Apis Linnaeus, 1758. The honeybee.
Feral colonies nest in cavities, e.g. hollow trees. Colonies are perennial. Nests consist of multiple waxen combs built in a series of vertically arranged layers with cells on each side. Each colony has a queen, up to 60,000 or more workers and several hundred males or drones. Cells to rear males are larger than those for the workers. Up to about ten queens are reared in special large cells which hang


Bombus sylvestris (Lepeletier, 1832)


Bombus bohemicus (Seidl, 1837)


Bombus vestalis (Geoffroy in Fourcroy, 1785)


Apis mellifera Linnaeus, 1758

downwards. Queen larvae are fed a special food called "royal jelly" which is a worker glandular secretion. New colonies are formed by fission with the old queen and a swarm of workers leaving the parent colony. If swarms are not collected by beekeepers, they can become feral.

Dark to light brown in colour and may have lighter coloured dorsal gastral bands. One national species found in Lincolnshire. 23 10km squares.

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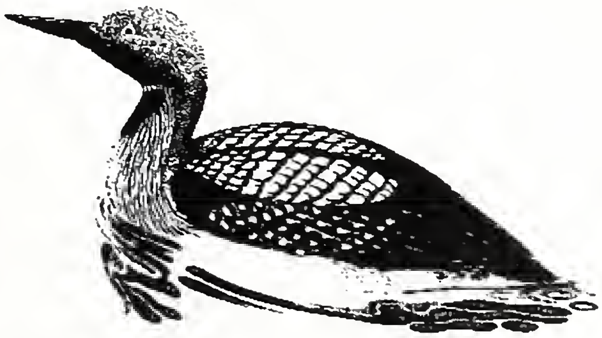

BANANA SPIDER – AN UPDATE

Annette Binding

In my 2008 spider report which was published in Lincolnshire Naturalists' Union Transactions, I mentioned that I had found a Lycosid spider in bananas bought in a local supermarket. The bananas had been imported from Colombia so it was possible that the spider came from there.

My report was subsequently published in the Spider Recording Scheme News.

Shortly after the article appeared I received an e-mail from Dr Rick Vetter at the Department of Entomology, University of California, Riverside. He is currently doing a study on spiders found in international cargo including those found in bananas. He told me that if the spider had been found in bananas imported into the United States it would be the cribellate Acanthoctenus.

Rick suggested I check my specimen (a mature female) to see if it had a cribellum and calamistrum and it did, confirming it as a member of the genus Acanthoctenus.

As with many invertebrates there are several similar species and my spider appears to be one of three species:- *Acanthoctenus spinipes*, *A. spiniger* or *A. gaujoni*. Although it is not possible to separate these species with certainty at the moment, I now know which genus it belongs to and I am grateful to Dr. R. Vetter for making this possible.

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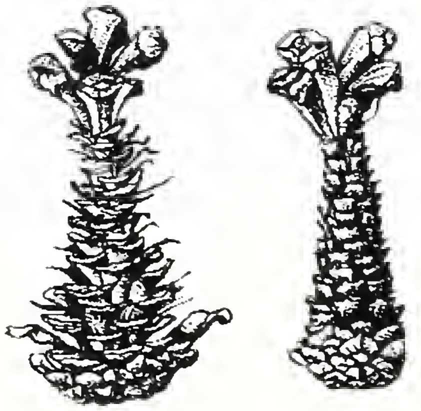


LINCOLNSHIRE NAURAL HISTORY IN 2010

BATS

Annette Faulkner

As usual the Bat Group has had a busy year carrying out surveys, attending shows and events, dealing with grounded bats and other bat-related issues via the Lincolnshire Bat Group helpline and other sources and collating all the ensuing records - although administration of the records for commercial surveys and the like has now passed to the Lincolnshire Environmental Records Centre.

The hibernation counts at nine sites across the county produced average results with seven species recorded.

Barbastelles *Barbastella barbastellus* continue to be surveyed in the Lincolnshire Limewoods with breeding confirmed in 2010 (and 2009) at Hatton Wood. 38 animals have been ringed although with only low re-trapping rates so far. They have also been recorded from 7 other nearby woodlands.

Elsewhere in the county, barbastelles continue to turn up in the south west and have been newly recorded from Math and Elsea and Bourne Woods. They continue to be recorded from Temple Wood, where they are sometimes the dominant species.

Barbastelles were also recorded in two of the three railway tunnels that are surveyed during the winter.

The bat colonies at Tattershall church continue to be studied and in August a pilot study was carried out to see if the building merits Site of Special Scientific Interest notification by Natural England.

In recent years we have had a number of anecdotal records of bats in the Gatehouse at Thornton Abbey near Goxhill and at the request of the recorder North Lincolnshire Council forwarded to the Bat Group a copy of the report of a 2005 survey, during which Natterer's *Myotis nattereri,* brown long-eared *Plecotus aritus* and pipistrelle spp *Pipistrellus spp* were recorded. This is clearly an important site for bats in the poorly recorded north east of the county and it is hoped to do some work on this site in 2011.

Finally, to end on a sad note, Theddlethorpe All Saints church, now redundant and one of our earliest recorded sites when 2 Natterer's bats were 'taken' and presented to Lincoln museum in 1904 (Blathwayt, 1913) and which still had Natterer's bats there when it was surveyed prior to re-roofing of the nave in 1999, has suffered two lead thefts from the roof in 2009 and 2010 and was consequently resurveyed prior to repairs. Although there was plenty of pipistrelle activity noted no signs of the Natterer's bats could be found.

Reference

BLATHWAYT, Rev F. L., 1913 *Transactions of the Lincolnshire Naturalists' Union*: Vol. 3 Part 1 p61

ACULEATE HYMENOPTERA

Michael Archer

The following 9 species are new records for Watsonian Lincolnshire:

Chrysis viridula Linn., Whisby Nature Park, R. Davidson.
Tiphia femorta Fab., Whisby Nature Park, R. Davidson.
Lasius sabularum (Bondroit), Little Scrubbs Meadow, A.L. Phillips.
Priocnemis fennica Haupt, Whisby Nature Park, R. Davidson.
Ectemnius dives (Lepeletier & Brullé), Whisby Nature Park, A.L. Phillips.
Ectemnius ruficornis (Zetterstedt), Willingham Wood, A.L. Phillips.
Andrena bimaculata (Kirby), Whisby Nature Park, A.L. Phillips.
Andrena flavipes Panzer, Willow Tree Fen, A.L. Phillips.
Anthidium manicatum Fab., Wybers Wood, Grimsby, A.L. Phillips.

The following 14 records are particularly important:

Bethylus cephalotes Foster, 3rd & 4th records, Red Hill and Kingerby Beck Meadows, A.L. Phillips.
Cleptes semiauratus (Linn.), 4th record, Banovallum House, A.L. Phillips.
Lasius umbratus (Nylander), 5th record, Little Scrubbs Meadow, A.L. Phillips.
Caliadurgus fasciatellus (Soinola), 2nd record, Kirkby Moor, A.L. Phillips.
Passaloecus singularis Dahlbom, 4th & 5th records, Far Ings and Kingerby Beck Meadows, A.L. Phillips.
Stigmus pendulus Panzer, 2nd record, Willingham Wood, A.L. Phillips.
Psenulus pallipes (Panzer), 4th record, Whisby Nature Park, A.L. Phillips.
Harpactus tumidus (Panzer), 4th record, Willingham Wood, A.L. Phillips.
Andrena tarsata Nylander, 2nd record, Moor Farm, A.L. Phillips.
Andrena tibialis (Kirby), 5th record, Whisby Nature Park, A.L. Phillips.
Lasioglossum fulvicorne (Kirby), 3rd & 4th records, Red Hill, A.L. Phillips.
Sphecodes niger von Hagens, 3rd record, Saltfleetby-Theddlethorpe dunes, A.L. Phillips. 4th record, Whisby Nature Park, R. Davidson.
Nomada flavoguttata (Kirby), 2nd record, Little Scrubbs Wood, A.L. Phillips.
Bombus ruderatus (Fab.), 9th record, Willow Tree Fen, A.L. Phillips and L. Hebdon.

I would like to thank the following who submitted records or specimens to be identified to me or via Alan Phillips: Annette Faulkner, Alan Lazenby, Alan Phillips, Peter Sclphur and via Alan Phillips: Alan Dale, Richard Davidson, Amanda Flynn, John Fylnn, Leslie Hebden, Phil Porter, Adrian Royle, Rachel Scopes and Colin Smith.

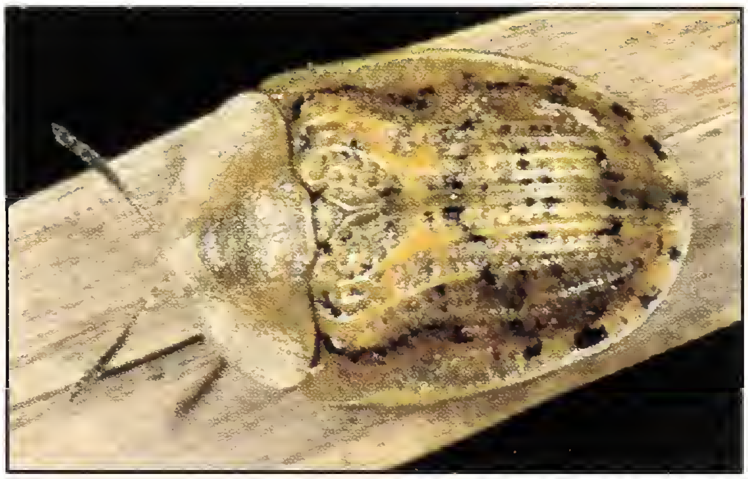
BEETLES

Charlie Barnes

Whilst I had not managed to get out in the field as much as I would have liked during 2010, it has given me the opportunity to get to grips with the beetle fauna of Lincolnshire and deal with the thousands of records and hundreds of specimens that have passed my way. That said, there is still a vast number of records and specimens to be looked at and this report by no means represents all of the work carried out in 2010 and is just a small selection of what I have received – I am certain many more interesting records will come to light.

Browsing a well-known photo management website for Lincolnshire beetles, I came across a set of photographs taken in 2010 by Mick Talbot, which stood out. They were of the RDB Endangered ladybird, *Clitostethus arcuatus*, an unmistakable (albeit rather diminutive at 1mm) member of the Coccinellidae. The ladybird was found at a site in Lincoln and is the first record of this species in Lincolnshire. Indeed, the UK Ladybird Survey run by the Biological Records Centre only has 11 other records for the whole of the UK from Norfolk, the London area and the midlands and recently featured the find in British Wildlife. An additional record, a little closer to home (sadly just over the border) in Harby, Nottinghamshire is provided by the Nottinghamshire Biological and Geological Records Centre. Said to be associated with ivy and viburnum, *C. arcuatus* feeds on whitefly and is often used as a biological control in glass houses. It is easily recognised with a pale horseshoe-shaped mark on dark brown elytra, although the marks sometimes appear as 'eyes' with a darker spot on each elytron.

A specimen of the RDB Rare scavenger beetle *Helophorus tuberculatus* collected by Allan and Annette Binding was one of the first beetles I had passed to me in 2010 for identification. Known only in Lincolnshire from Haxey Grange Fen, it is by far the easiest Helophorus to identify being black and bumpy, resembling a piece of charred twig. With scattered records across the country, it is often associated with areas of burnt peat, which goes some way to explain its rather comical appearance.



Cassida nebulosa
Photo A. Royle

Adrian Royle has sent through a number of important records, but one probably stands out as the most interesting. Adrian recorded the tortoise beetle *Cassida nebulosa* in the Limewoods during August 2010. It was last recorded in Lincolnshire in 1907 at Freshney Bog with only one additional, undated, record from Nocton in the south of the county (but also from around the turn of the 20th century). Another unmistakable beetle, *C. nebulosa* is classified RDB Indeterminate, with a rash of records (many of them from before 1979) from below a line from the Wash to the Bristol Channel. *C. nebulosa* is found on members of the Chenopodiaceae (goosefoots), including oraches and beet of which it is considered a pest in other countries.

Adrian has also reported continuing occurrences of the bright red, net-winged beetle *Platycis minuta* in Chambers Farm Wood during 2010. Although remarkably similar to the other bright red, net-winged beetle *Pyropterus nigroruber* for which Chambers Wood complex is well known for, *P. minuta* occurs later in the year and can be distinguished from P. nigroruber by having a yellow terminal segment to the antennae. This is the fourth site for *P. minuta*, having first been found in the county in 1999 at Grimsthorpe Park and subsequently at Snipe Dales and College Wood.

Alan Lazenby has sent in a good number of records for South Lincolnshire, which has bolstered the VC53 list somewhat when compared to VC54 - many of these represent species that have been recorded 'north of the border'. Of particular note was *Cerycon analis* which is the first record of this small member of the Hydrophildae in VC53, although it is widely distributed throughout the rest of the country. Also of note were the 2nd records of the clown beetle *Paralister purpurascens*, the ground beetle *Anisodactylus binotatus* in 2009 and the small green weevil *Polydrusus splendidus* in 2010. Alan has also recorded a new species to the county, *Meligethes gagathinus*, a Nationally Notable pollen beetle associated with corn mint, with only a few records scattered around the coast of England and Wales.

Panagaeus cruxmajor
Photo B. Merritt

Whilst writing this report I have also received news of the UKBAP and RDB Endangered species *Panagaeus cruxmajor*, the crucifix ground beetle near Alkborough, from Bob Merritt. This represents a second site for this rare beetle in Lincolnshire, having been found only at Saltfleetby-Theddlethorpe Dunes in recent times and it adds to the handful of known sites across Britain.

My own contributions for 2010 so far include the 4th record of the bloody-nose beetle, *Timarcha tenebricosa*, only a mile or so from where it was last recorded in 1956 near Leadenham, additional records of the Nationally Notable Nb spider beetle *Ptinus sexpunctatus* and the leaf beetle *Pyrrhalta virburni* (both of which are more commonly found in suburban environments) and southern county rarities such as the leaf beetle *Sermylassa halensis*. Of particular interest from an ecological point of view was a hat trick of Cionus weevils on a single buddleia bush in my garden – *Cionus scrophulariae*, *C. hortulanus* and *C. alauda*; the latter two being relatively uncommon in Lincolnshire."

BUTTERFLIES

Allan Binding

In 2010 migrant butterfly species had a very poor year but many of the native species had a very good year.

Lawrie Poole, a Butterfly Conservation Lincolnshire Branch committee member, suggested recruiting a team to undertake a survey of the grizzled skipper in Lincolnshire. This was agreed on so he requested all the records of this species from me. He noticed that the distribution maps showed that most of the records were from south-west Lincolnshire on the Kesteven Uplands limestone area. It was decided to concentrate the survey in south-west Lincolnshire between Grantham and the Lincolnshire southern boundary. Among the areas visited by the team were quarries, disused railways and public footpaths. Each recorder was given an area to survey and had the option of surveying more than one area. No-one knew how successful this survey would be. Another team from Butterfly Conservation East Midlands Branch surveyed the areas of land just over the border of south-west Lincolnshire in Nottinghamshire, Leicestershire, and Rutland. The results were very impressive. As well as grizzled skipper all the other species of butterfly seen were recorded at the same time and among the more interesting species were the dingy skipper and green hairstreak, neither of which is common in the county. The results are as follows:

Grizzled skipper - recorded from seven 10km squares in 2010. In 2009 this species was recorded in three 10 km squares.

Dingy skipper - recorded from four 10km squares in 2010. In 2009 this species was recorded in three 10 km squares.

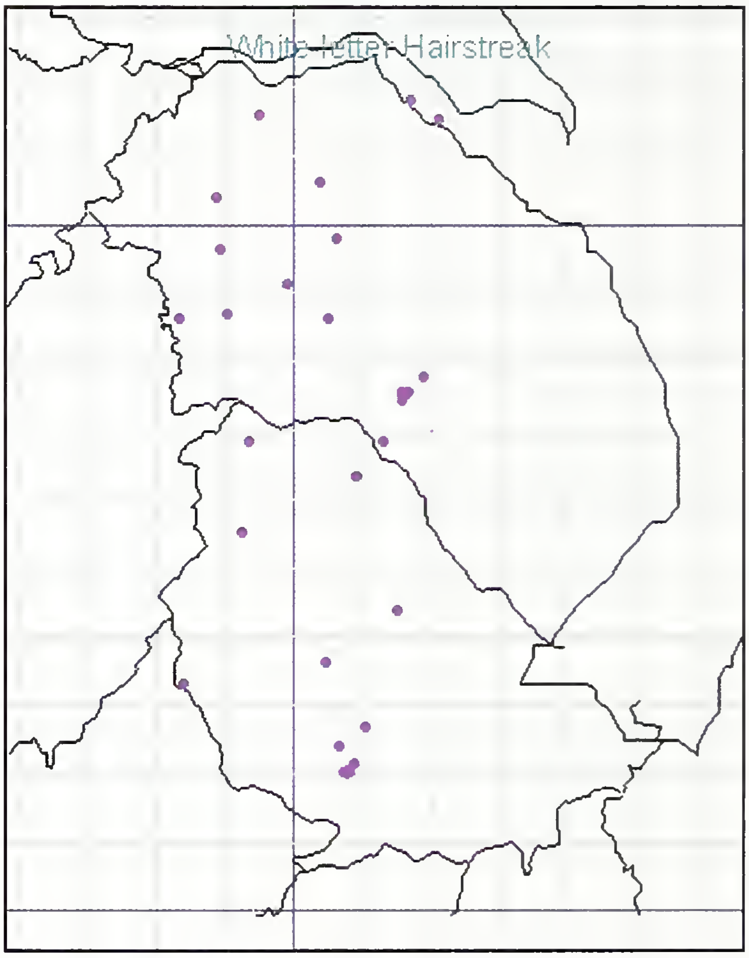
Green hairstreak - recorded from ten 10km squares in 2010. In 2009 this species was recorded in seven 10km squares.

Another species targeted in Lincolnshire in 2010 was the white-letter hairstreak. Most of the survey work on this species in the last few years has been carried out by Liz Goodyear (Butterfly Conservation Herts. & Bedfordshire Branch) and Martin Greenland (Butterfly Conservation Yorkshire Branch) as part of a national survey which they have been organising and carrying out. Additional records were supplied by Peter Smith, Norman Villiers, K. Robinson, Ian Lee and Terry Connellon. The results are as follows:

White-letter hairstreak recorded from twenty-one 10km squares in 2010 and only six 10km squares in 2009.

White-letter hairstreak
Photo A. Binding

Distribution map for white-letter hairstreak



Other species of note in 2010 included a single record of dark green fritillary received from Gibraltar Point. This butterfly may have migrated from the north Norfolk coast where the species is regularly recorded. Grayling had a good year but their future survival is threatened by their habitat being transformed into building sites and refuse dumps.

Common blue also had a very good year with over one hundred individuals recorded from some prime locations.

Some of the common species did not do so well in 2010. These included the small tortoiseshell, peacock and small copper. Wall brown which is nationally decreasing in numbers also had a poor year.

FRESHWATER INVERTEBRATES

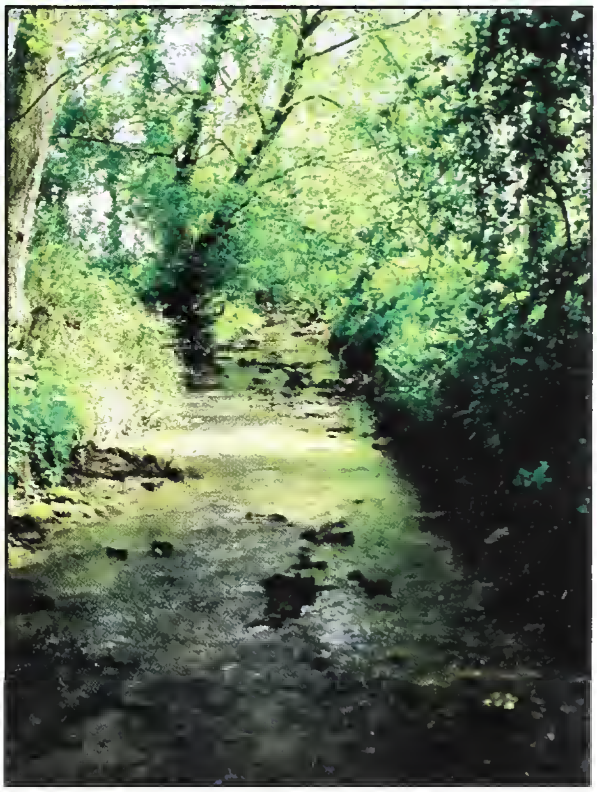
Richard Chadd

This was a rather unremarkable year for freshwater invertebrate species, with little of note. Some of the rarer species in Lincolnshire have, however, continued the past decade's trend in range or population expansion.

The River Welland at Uffington Photo R. Chadd

For example, the grannom caddisfly *Brachycentrus subnubilus* Curtis expanded its downstream distribution to Aubourn (SK918628) on the River Witham and Uffington (TF067069) on the River Welland. The species has continued to be common in the Witham at Claypole (SK842489).

The scarce olive mayfly *Baetis buceratus* Eaton maintained a population at Barkston (SK414928) on the River Witham. It was last recorded there in 2006, so this is a welcome consolidation.



West Torrington Beck Photo R. Chadd

Last year I reported an apparent 2009 record of the Nationally Notable headwater specialist caddisfly *Hydropsyche fulvipes* (Curtis) at Hainton on West Torrington Beck (TF1783785326). The specimens could not be verified, as they had been destroyed before I was able to see them, but this was not an especially unlikely record for the species, as the habitat is appropriate. The site was visited again in March and November 2010 by this author and the very similar Nationally Notable headstream species *Hydropsyche saxonica* McLachlan was present as three larval specimens in the autumn. I consider it highly likely, therefore, that the previous record of *H.fulvipes* was an erroneous identification of *H. saxonica* specimens.

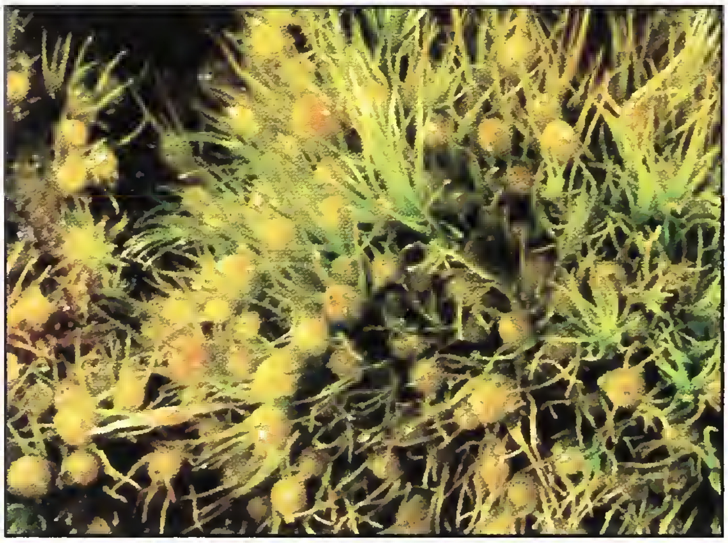
Both species are known elsewhere in Lincolnshire (for example, in a spring system south of Caistor for *H.fulvipes* and the River Bain headwaters for *H. saxonica*), but neither are common.

BRYOPHYTES

Christine Rieser and Frank Lammiman

Field visits of members of the British Bryological Society to South Lincolnshire vc.53 in April gave us some new records and details of this work are reported elsewhere (Graham and Stevenson, 2010)

Bryophyte surveys mainly in vc54 have continued during 2010 and included checking the status of nationally uncommon taxa and further checking of the current status of species rare in Lincolnshire as it is considered important to observe the condition of these rather rare plants. Further listing of species on stone at churchyards has continued.



Pleuridium acuminatum
Photo C. Rieser

There has also been a new record for vc53 *Pleuridium acuminatum*, a moss seen as usual with an abundance of orange-coloured, spherical capsules was found by Ray Harding in Bourne Woods in 2009 and registered with the British Bryological Society in 2010.

Of interest as a moss that is not easily recognised and has not been recorded recently in Lincolnshire is *Brachythecium glareosum*. It is a silky, yellowish, branched moss of medium size and can be identified as examination shows the leaf apices to be twisted. An extensive patch was found on old concrete tracks in Austacre Wood

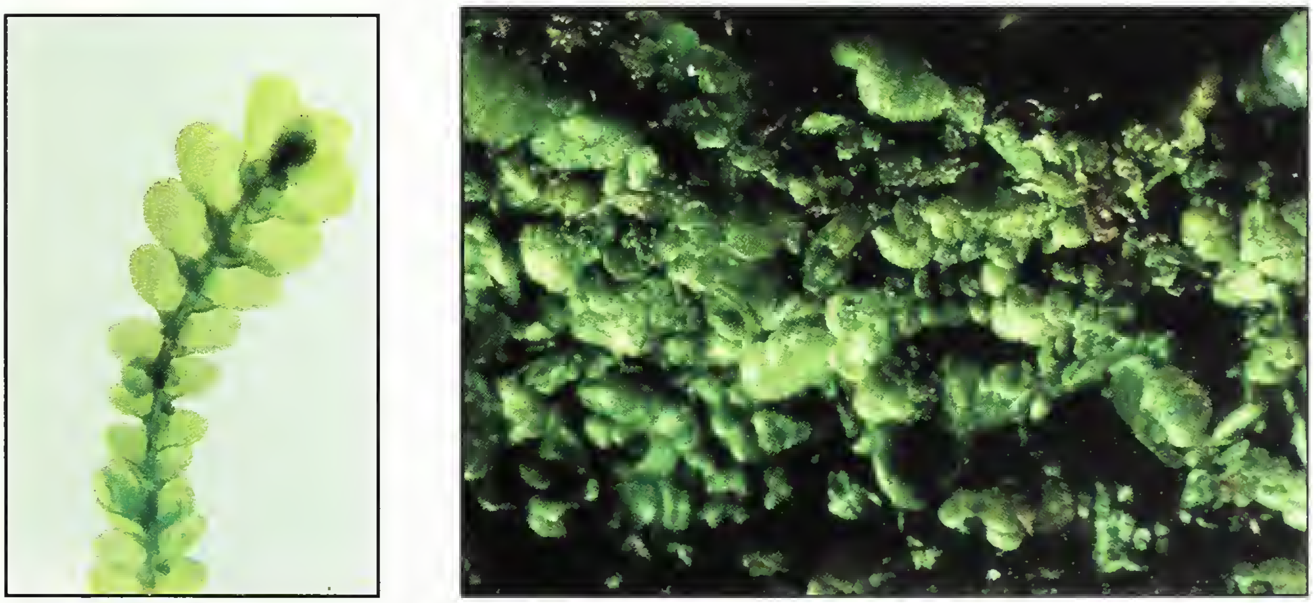
Of the nationally rare or uncommon species, *Platygyrium repens* (Photo - page 255) is notable and is still present in some quantity on a few trees in Muckton Wood and May Wood, Elkington. It was also recorded in Math and Elsea Wood near Bourne in 2002 but has not been confirmed there recently.

Platygyrium repens (Close up – right) Photos C. Rieser

Dicranum flagellare is another moss that is only occasional in south-east England and very rare elsewhere. It still grows on old rotten stumps in Hardy Gang Wood.

A search was made for the handsome moss *Climacium dendroides* which was last recorded at Churchill Lane, Theddlethorpe in 2004 but some work done near the footpath has apparently destroyed the habitat and the moss could not be found. This moss is listed as in danger of extinction on the east side of the country

Plants which are rare in Lincolnshire but common in more damp environments in the west of the country include the minute epiphytic leafy liverwort *Lejeunia cavifolia*. This was found in small quantity on ash in Swinn Wood in 2007 when it was a new county record. It is very rare on the eastern side of the country and after searching a number of times we were pleased to find it again in Swinn Wood in a nearby site on coppiced lime, present as several colonies amongst *Metzgeria furcata*.



Lejeunia cavifolia close up – left Photos C. Rieser

Another uncommon epiphytic leafy liverwort *Frullania tamarisci* has been found at a new site in Legbourne Wood. This species has been recorded recently from only 3 other sites in North Lincolnshire vc54 but from each of these it appears to have been lost by competition with stronger mosses.

Inspection of the condition of *Loeskeobryum brevirostre*, previously recorded from a chalky bank near Binbrook revealed that the moss had diminished due to shading by overgrown grass and shrubs. This moss is very rare on the east side of the country and was a new county record in 1999 so it would be a pity if it were lost.

Ephemerum recurvifolium is a minute ephemeral moss of basic soils considered to be nationally under-recorded. It is known from Red Hill Chalk Quarry where it was recorded by Frank Lammiman in 1991 and also from Swaby Valley. It has been found again at Red Hill Quarry.

Ephemerum recurvifolium
Photo C. Rieser

The presence of one of our least common bog mosses, *Sphagnum tenellum* has been confirmed in the wetter areas of Linwood Warren, last recorded in 1998. It is a delicate plant recognised in the field by the open claw-shaped branch apex.

Another plant found normally in bogs is *Polytrichum strictum*. It has been recorded previously from Crowle Waste and Scotton Common but appears to be growing confidently in Fiskerton Wood but in an area where some soil may have been brought in from elsewhere.

A further 38 churches and churchyards have been studied bringing the total since the end of 2008 to 109. It is hoped to analyse these results later.

Reference

GRAHAM, G. & STEVENSON, R. 2010, BBS Spring Meeting 2010, *Field Bryology*.**102.** 59-71. British Bryological Society

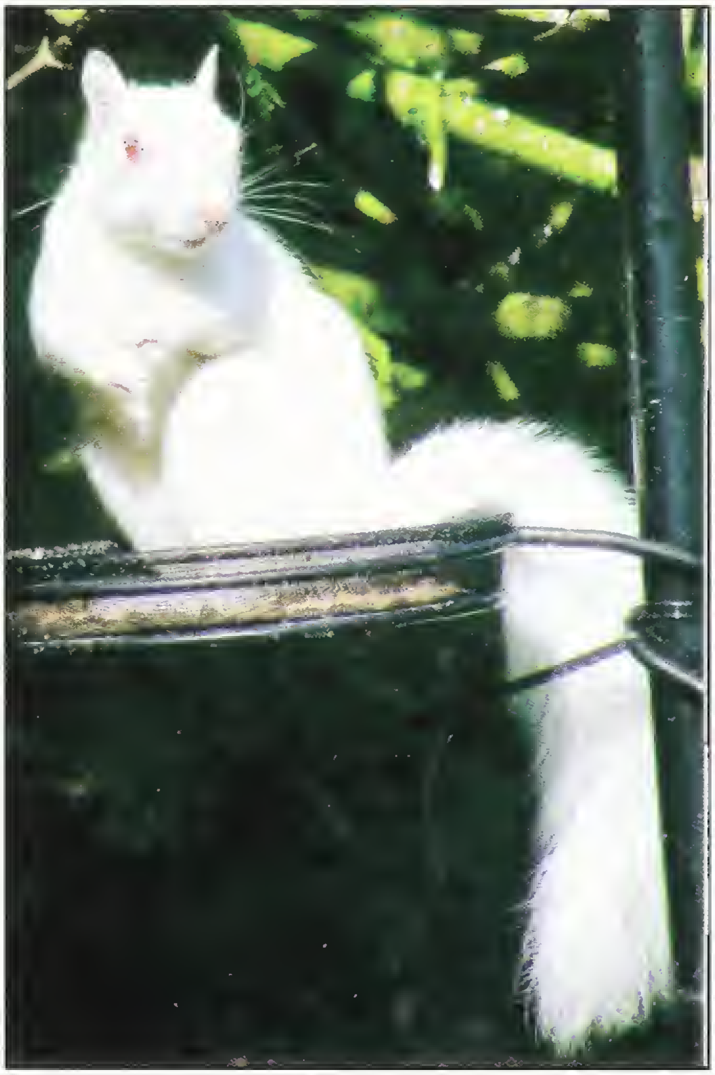
MAMMALS

Chris J. Manning

In 2010, 1,462 records were entered into the mammal database. The most common species were; brown hare *Lepus europaeus* (239), hedgehog *Erinaceus europaeus* (166), badger *Meles meles* (152), grey squirrel *Sciurus carolinensis* (143) and mole *Talpa europaea* (134). Greater effort is being put into recording hedgehogs with the Lincolnshire Biodiversity Partnership collecting records at Wild About Lincolnshire, in 2009 and at the 2010 Lincolnshire Show. These records predominately relate to hedgehogs in gardens and demonstrate a county wide distribution, although the density and population trends are currently unknown.

Most records were of sightings (860) and road casualties (335). Five recorders provided more than 100 records during the year: Andrew Chick, Nick Tribe, K.D. Robertson, Brian Hedley and Charlie Barnes. Records were also collected from the Wildnews Bulletin and the Lincolnshire Bird Club forums.

Interesting sightings during 2010 include an albino grey squirrel seen in September at Fulstow by Mrs C. Tice. Five otter road casualties were recorded, pleasingly 19 other records were received, mostly field signs but Ben Revell managed to photograph an otter swimming at Messingham Sand Quarry in April.



Grey squirrel albino
Photo C. Tice

The first Lincolnshire records using a trail camera were provided by Andrew Chick in August with a fox and badger photographed in the same picture at Welbourn, these cameras provide records that can easily be verified and minimise disturbance.

There is a Lincolnshire-based venture, breeding and releasing polecats from stock reported to originate from a zoo-based breeding programme (Slater, P.R. pers. comm.). In 2010 fourteen unrelated pairs were released at two locations in Lincolnshire, so far with one fatality, killed by a farmer's dog (Slater, pers. comm.). Anecdotal reports suggest a 50% reduction in the local rabbit *Oryctolagus cuniculus* population on one release site, with rabbit control apparently one rationale for these releases (Slater, P.R., pers. comm.). The status of Lincolnshire's fummard (*Mustela putorius* sp.) population is still being evaluated (Manning, 2009) with introgression likely to damage both the feral and released animals. This programme is not endorsed by the LNU, it is not in support of a Species Action Plan in the Lincolnshire Biodiversity Action Plan or in accordance with IUCN guidelines (IUCN, 1998). Nevertheless, we will welcome reports on any polecat sightings, including road kills, as it is important to determine the effect of these releases in the absence of proper monitoring programmes.

References:

IUCN, 1998. *Guidelines for re-introductions*, prepared by IUCN/SSC, Re-introduction specialist group, Gland, Switzerland & Cambridge, UK.
MANNING, C.J. 2009. The return of the fummard *(Mustela putorius* sp.*), Transactions* Vol. 27 Part 2. Lincolnshire Naturalists' Union.

MOSSES, LIVERWORTS AND LICHENS

M.R.D. Seaward

The remarkable changes to our county's bryophyte and lichen floras continue, mostly for the better, but the additional burden imposed by the rise in nitrogenous products derived from agricultural practices and animal husbandry is clearly evident. The lichen assemblages on a wide range of substrata are dominated by a few colourful taxa, being particularly eye-catching in winter months on those roadside bushes which have shed their leaves. Despite this, many new records of bryophyte and lichen taxa, some not seen for more than a century, have been added to our lists in recent years. Of particular interest are churchyard studies which often provide an oasis for wildlife in an otherwise rather monotonous landscape; the wide range of local and imported stones for building materials and tombstones provide interesting substrata, their texture and pH supporting specific bryophytes and lichens. As part of the British Lichen Society's churchyard survey, a further 14 churchyards have been visited for the first time, and three have been revisited; to date, 583 (representing c. 86% of the Church of England churchyards in the county) have now been researched. Similar interest has been shown in bryophytes of Lincolnshire churchyards, as reflected in many of the new records listed below.

Although visits to Gibraltar Point were made by the recorder in 1963, 1964 and 1970 and by Nancy Wallace in 1969, there have been no subsequent records from the reserve. It is sad to report from a visit there in June 2010 that over the past 40 years it would appear that, despite the larger area of the reserve accreted via coastal erosion to the north of the county and the maturing of the dune systems, the soil-inhabiting (terricolous) lichen flora, particularly *Cladonia* spp., has declined significantly. Other than a reasonable coverage of *Cladonia rangiformis*, often only represented by its basal squamules, only three sparingly present *Peltigera* spp. are to be found on the dune surface. However, the growth of shrubs and the importation of building materials, timber, etc. have added considerably to the variety of available substrata available for colonisation and thereby biodiversity, with net increases in the numbers of strictly corticolous, saxicolous and lignicolous species.

A highlight of the year was the visit by the British Bryological Society to the south of the county on 21, 22 and 23 March, the main sites explored being Ancaster Valley, Wilsford Heath Quarry, Whisby Nature Park, Norton Disney church, Hartsholme Country Park, Hardy Gang Wood, Newall Wood, Rand Wood and Rauceby Warren. A detailed account of the meeting is provided by Graham and Stevenson (2010).

Due to the on-going excellent local work of F.R. Lammiman (FRL) and C. Rieser (CR), the extensive efforts by members of the British Bryological Society Field Meeting (BBS) and a further visit to the county by M.O. Hill (MOH) and C.R. Stevenson (CRS) on 7 October, and an additional record provided by R. Harding (RH) in 2008, many records have been added to our bryological lists in 2010, namely five county (*Didymodon nicholsonii*, *Microlejeunea ulicina, Racomitrium aciculare*, *Sanionia uncinata and Taxiphyllum wissgrillii*), five vice-county (*Didymodon umbrosus*, *Fossombronia incurva*, *Oxyrrhynchium speciosum, Pohlia annotina* and *Racomitrium ericoides*), 59 divisional and innumerable grid square records. The lichens listed below have been contributed by the late T.W. Chester (TC) in 1996, D.H. Smith (DHS) in 1995 and M.R.D. Seaward (MRDS) in 2010; they include five county (*Anisomeridium polypori*, *Lecania rabenhorstii*, *Leptogium tenuissimum*, *L. turgidum* and *Opegrapha ochrocheila*), one vice-county (*Parmotrema perlatum*) and 49 divisional records. The bryophyte and lichen nomenclature is mainly according to Hill *et al.* (2008) and Smith *et al.* (2009) respectively.

Mosses

Barbula convoluta var. *sardoa* Schimp. + 14 (BBS)
Brachythecium glareosum (Spruce) Schimp. + 13 (BBS)
B. mildeanum (Schimp.) Schimp. + 15 (BBS)
B. rivulare Schimp. + 14 (BBS)
Bryum algovicum var. *rutheanum* (Warnst.) Crundw. + 10 (MOH & CRS)
B. pseudotriquetrum var. *bimum* (Brid.) Lilj. + 13 (BBS) – last recorded in Lincs. in 1931, and in S. Lincs. in 1899
B. ruderale Crundw. & Nyholm + 13 (BBS), 14 (BBS)
B. subapiculatum Hampe + 10 (MOH & CRS)
B. violaceum Crundw. & Nyholm + 10 (MOH & CRS)
Cryphaea heteromalla (Hedw.) D.Mohr + 13 (BBS)
Dicranella staphylina H.Whitehouse + 13 (BBS)
Dicranum tauricum Sapjegin + 14 (BBS)
Didymodon luridus Hornsch. ex Spreng. + 13 (BBS)
D. luridus Hornsch. ex Spreng. + 6 (FRL & CR)
D. nicholsonii Culm. + 15 (Sedgebrook, March 2010, BBS, **NCR**)
D. rigidulus Hedw + 13 (BBS)
D. sinuosus (Mitt.) Delogne + 10 (MOH & CRS), 13 (BBS)
D. tophaceus (Brid.) Lisa + 10 (MOH & CRS)
D. umbrosus (Müll.Hal.) R.H.Zander + 10 (New Bolingbroke, October 2010, MOH & CRS, **VCR**)
Fissidens incurvus Starke ex Rohl. + 13 (BBS)

Gyroweisia tenuis (Hedw.) Schimp. + 10 (MOH & CRS)
Hylocomium splendens (Hedw.) Schimp. + 13 (BBS) – last recorded from S. Lincs. in 1920
Hypnum andoi A.J.E.Sm. + 15 (BBS)
H. cupressiforme var. *lacunosum* Brid. + 13 (BBS)
H. jutlandicum Holmen & E.Warncke + 14 (BBS)
Isothecium myosuroides Brid. + 6 (FRL & CR)
Microbryum davallianum (Sm.) R.H.Zander + 10 (MOH & CRS)
Orthotrichum cupulatum Brid. + 10 (FRL & CR), 13 (BBS)
O. pulchellum Brunt. + 13 (BBS)
O. stramineum Hornsch. ex Brid. + 13 (BBS), 14 (BBS)
O. striatum Hedw. + 13 (BBS)
Oxyrrhynchium pumilum (Wilson) Loeske + 13 (BBS), 14 (BBS), 15 (BBS)
O. speciosum (Brid.) Warnst. + 15 (R.Witham, nr Syston, March 2010, BBS, **VCR**)
Plagiomnium affine (Blandow) T.J.Kop. + 13 (BBS)
Plagiothecium curvifolium Schlieph. ex Limpr. + 6 (FRL & CR)
P. undulatum (Hedw.) Schimp. + 11 (FRL & CF)
Pleuridium acuminatum Lindb. + 16 (RH 2008)
Pohlia annotina (Hedw.) Lindb. + 13 (Whisby Nature Park, March 2010, BBS, **VCR**)
Polytrichastrum formosum (Hedw.) G.L.Sm. + 14 (BBS)
Polytrichum strictum Brid. + 6 (FRL & CR) – only the third record for the county
Pseudocrossidium revolutum (Brid.) R.H.Zander + 7 (FRL & CR)
Racomitrium aciculare (Hedw.) Brid. + 15 (Sedgebrook, March 2010, BBS, **NCR**)
R. ericoides (Brid.) Brid. + 13 (Whisby Nature Park, March 2010, BBS, **VCR**)
Rhynchostegiella tenella (Dicks.) Limpr. + 13 (BBS)
Sanionia uncinata (Hedw.) Loeske + 13 (Whisby Nature Park, March 2010, BBS, **NCR**)
Schistidium crassipilum H.H.Blom + 11 (FRL & CF), 13 (BBS), 14 (BBS)
Syntrichia montana Nees + 3 (FRL & CR), 12 (FRL & CR), 13 (BBS)
S. virescens (De Not.) Ochyra + 14 (BBS)
Taxiphyllum wissgrillii (Garov.) Wijk & Margad. + 14 (Wilsford Heath Quarry, March 2010, BBS, **NCR**)
Tortula lanceola R.H.Zander + 14 (BBS)
Trichodon cylindricus (Hedw.) Schimp. + 10 (MOH & CRS), 13 (BBS)
Ulota crispa (Hedw.) Brid. + 13 (BBS), 14 (BBS)

Liverworts

Cololejeunea minutissima (Sm.) Schiffn. + 13 (BBS), 14 (BBS)
Diplophyllum albicans (L.) Dumort. + 14 (BBS) – last recorded from S. Lincs. in 1898
Fossombronia incurva Lindb. + 13 (Teal Lake, Whisby Nature Park, March 2010, BBS, **VCR**)
Marchantia polymorpha ssp. *ruderalis* Bischl. & Boisselier + 10 (MOH & CRS), 13 (BBS)
Metzgeria violacea (Ach.) Dumort. + 13 (BBS)
Microlejeunea ulicina (Taylor) A.Evans + 14 (Wilsford Heath Quarry, March 2010, BBS, **NCR**)

Pellia neesiana (Gottsche) Limpr. + 7 (FRL & CR) – only the second record for N. Lincs.
Plagiochila porelloides (Torr. ex Nees) Lindenb. + 14 (BBS)

Lichens

Acarospora rufescens (Ach.) Kremp. + 12 (MRDS)
Agonimia tristicula (Nyl.) Zahlbr. + 12 (MRDS)
Anisomeridium polypori (Ellis & Evenh.) M.R.Barr + 15 (on ? *Fraxinus,* Ancaster Valley Nature Reserve, March 2010, MRDS, **NCR**)
Arthonia radiata (Pers.) Ach. + 12, 14 (MRDS)
Belonia nidarosiensis (Kindt) P.M.Jørg. & Vĕzda + 2 (MRDS)
Calicium viride Pers. + 14 (MRDS)
Caloplaca crenularia (With.) J.R.Laundon + 2 (DHS 1995)
C. crenulatella (Nyl.) H.Olivier + 6 (MRDS)
C. flavocitrina (Nyl.) H.Olivier + 2, 12 (MRDS)
C. flavovirescens (Wulfen) Dalla Torre & Sarnth. + 12 (MRDS)
Candelariella reflexa (Nyl.) Lettau + 6, 14 (MRDS)
Chaenotheca ferruginea (Turner ex Nyl.) Mig. + 14 (MRDS)
Cladonia coniocraea (Flörke) Spreng. + 14 (MRDS)
C. macilenta Hoffm. + 3 (MRDS)
Collema fuscovirens (With.) J.R.Laundon + 2, 14 (MRDS)
C. tenax (Sw.) Ach. + 6 (MRDS)
Haematomma ochroleucum (Neck.) J.R.Laundon var. *ochroleucum* + 15 (MRDS)
Hyperphyscia adglutinata (Flörke) H.Mayrhofer & Poelt + 6, 15 (MRDS)
Hypocenomyce scalaris (Ach. ex Lilj.) M.Choisy + 2 (DHS 1995)
Lecania cyrtella (Ach.) Th.Fr. + 3 (MRDS)
L. rabenhorstii (Hepp) Arnold + 11 (Croft churchyard, July 1996, TC, **NCR**)
L. turicensis (Hepp) Müll.Arg. + 2 (MRDS)
Lecanora pulicaris (Pers.) Ach. + 14 (MRDS)
L. saligna (Schrad.) Zahlbr. + 11 (MRDS)
Leptogium tenuissimum (Dicks.) Körb. + 3 (on compacted soil, Nettleton Hill, June 2010, MRDS, **NCR**)
L. turgidum (Ach.) Cromb. + 2 (on tombstone, Hibaldstow churchyard, Nov. 2010, MRDS, **NCR**)
Melanelixia subaurifera (Nyl.) O.Blanco et al. + 12 (MRDS)
Micarea lignaria (Ach.) Hedl. + 14 (MRDS)
Ochrolechia parella (L.) A.Massal. + 12 (MRDS)
Opegrapha atra Pers. + 11 (TC 1996)
O. ochrocheila Nyl. + 14 (on *Quercus* in disused quarry, S of Wilsford Heath, March 2010, MRDS, **NCR**)
Parmotrema perlatum (Huds.) M.Choisy + 14 (single thallus on *Quercus* branch in disused quarry, S of Wilsford Heath, March 2010, MRDS, **VCR**)
Peltigera canina (L.) Willd. + 11 (MRDS; only the third confirmed record for the county)
P. neckeri Hepp ex Müll.Arg. + 11 (MRDS; only the second record for the county, the previous one made in 1931)
Phaeophyscia orbicularis (Neck.) Moberg + 12 (MRDS)
Physcia aipolia (Ehrh. ex Humb.) Fürnr. + 6 (MRDS)
Physconia enteroxantha (Nyl.) Poelt + 14 (MRDS)
Protoparmelia badia (Hoffm) Hafellner + 14 (MRDS)

Punctelia jeckii (Roum.) Kalb. + 14 (MRDS)
Ramalina fastigiata (Pers.) Ach. + 3 (MRDS)
Toninia aromatica (Sm.) A.Massal. + 2 (MRDS)
Trapeliopsis granulosa (Hoffm.) Lumbsch. + 12 (MRDS)
Xanthoparmelia verruculifera (Nyl.) O.Blanco et al. + 15 (MRDS)
Xanthoria elegans (Link.) Th.Fr. + 12 (MRDS)

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FUNGI

Ray Halstead

In contrast to last year this year has been a very good year for fungi resulting from the ample rainfall that we experienced in the late summer. The year started extremely well for me with an exceptional find, more of which later.

Leccinum scabrum, the birch bolete (Page 263)
Photo Ray Halstead

The spring produced a number of reports from various people around the county finding large numbers of morels, mostly *Morchella esculenta forma vulgaris*, occasionally *Mitrophora semilibera* and one report of *Morchella elata*.

I have been on 13 forays this year at various locations in the northern half of the county amassing almost 700 records. Early forays at Chamber's Farm Wood and Usselby plantation found large numbers of the Amanitas, in particular at Chamber's a stand of approximately 200 fruit bodies of *Amanita phalloides*. The boletes were also quite abundant early in the season; a large number of *L. versipelle* had been harvested from Usselby Plantation when I visited there in early September.

The LNU foray this year was held at Hoplands Wood and was well attended with 14 people attending. 71 species were recorded for the day though I'm hoping for a few more from individuals that have yet to forward their records for the day. Of particular interest here was *Auricularia mesenterica* which Ken Rowland informed me has been present on the same trunk of an Ash tree, one struck by lightning many moons ago, for over 40 years.

All of the public forays have been well attended this year, where possible I prefer to accompany a group of no more than 20 people. At Snipe Dales and Chamber's Farm Wood this number was more than doubled! This makes for very hard work and is not always beneficial for recording purposes as we see the same fungus being presented to us repeatedly with the usual question of 'Is it edible?' My response to this question has now become 'I can help you to identify it, if you wish to eat it then that is entirely up to you.' On a more positive note there does seem to be an increase in members of the public with an overall interest in mycology. Worth mentioning here is the number of suspected fungi poisonings reported to the NHS. Up to the date of her report, Nicky Trupp of The Health Protection Agency's National Poisons Information Service had 209 cases of poisonings, almost double the previous year of 123 cases, about a third of these were from wild mushroom pickers.

Progress is being made with downloading the records from 2010. To the end of December 2009 there were 53855 records on the database. These records have now been copied to the CATE 2 database which has been set up by Michael Jordan of the Association of British Fungus Groups (ABFG). This database contains in excess of half a million records from counties across England and

Battarrea phalloides (Page 264) Photo Association of British Fungus Groups

Wales, from Cornwall to Northumberland and is accessible to anyone wishing to analyse fungus records.

In February of this year I was fortunate enough to discover a fungus that, since 1782, has been recorded less than 100 times and never before in Lincolnshire. Most of the records of *Battarrea phalloides,* (sandy stiltball), have come from the south-eastern counties, i.e. Cambridgeshire, Suffolk and Norfolk and not surprisingly it is both a Red Data species and on the current BAP list.

Due to its rarity it is little understood in the UK, experts are uncertain as to whether it is mycorrhizal or a saprophyte on buried wood and if it is associated with any particular species. As its common name suggests this is a fungus that is confined to sandy soil type habitats, it is not unreasonable therefore to expect to find it on the coast of Lincolnshire but this is currently the most northern colony in the UK.

The mature fruit bodies resemble a typical agaric but with a very tall woody, scaly stem that can typically attain a length of 30cm. Unlike an agaric the cap does not contain gills but instead has a spore sac (peridium), which when ripe splits in a circumscissile manner. The exposed spores are sticky and carried away by the wind, which also dries the remaining peridium. As it dries the peridium shrivels and rolls up exposing more spores that are again dispersed by wind action but due to their non-sticky nature are able to travel further. The few spores that remain as the peridium continues to dry further are eventually washed away by rain and distributed locally.

Location of *B. phalloides* fruit bodies.
Photo Ray Halstead

The group that I found contained 7 fruiting bodies and was positioned on a small earth bank adjacent to a footpath beneath a hawthorn bush, *Crataegus monogyna*. Given its location I was surprised that it hadn't been found and reported earlier by someone else, it would have fruited in the late summer/early autumn and had therefore been clearly visible for up to six months with a good number of people walking past it to access the sea shore at Saltfleetby-Theddlethorpe Dunes. In September 2010 I was informed by LWT that indeed someone had spotted it last October, given its rarity I would have appreciated a much quicker response.

Other notable records for this year include *Melanophyllum echinatum* from Skellingthorpe Old Wood and Normanby Park; there are currently only two records of this in Lincolnshire, one from 1946 at Thonock Wood and more recently at Laughton Forest in 1989. *Coprinellus congregates,* a first for Lincolnshire, turned up in commercial compost in Ken Rowland's greenhouse, most likely under recorded due to its habit of fruiting very early in the morning for just a few hours before disappearing via the process of deliquescence. The genus Cortinarius includes a massive number of species that most accomplished mycologists are afraid to tackle due to their similarity in characteristics both in the field and under the microscope. However when we do come across them they are usually taken home in the hope that we can identify one occasionally. Ken normally passes them to either myself or Jackie Freeman much to our delight; this year I have had success with *Cortinarius caesiocortinatus* at Chamber's Farm Wood and Thurlby Wood.

Thank you to everyone who has sent in records for this year, please keep them coming however insignificant they may seem. The more information I receive regarding a particular specimen the easier it is for me to include it on the database with its full potential;, as a bare minimum please include the name of the fungus, (Latin if known), the location (site with grid reference) and what it was growing near and/or on.

My thanks to Ken Rowland, Jackie Freeman and Colin Faulkner and others who have sent me records and supported and assisted me at various forays this year.

SHIELDBUGS

Annette Binding

Only thirteen of the twenty-one species previously recorded in Lincolnshire were recorded in 2010 and there were no new species added.

Negro bug *Thyreocoris scarabaeoides*
Photo A. Royle

The most notable record was a new site for the negro bug *Thyreocoris scarabaeoides*. In early September Adrian Royle sent me two photographs of the negro bug which he had taken in Ivy Wood, part of the Chambers Farm complex. He found two specimens of this uncommon bug on the 5th September. The species has only been recorded from two other locations in the county, both in the Isle of Axholme where it was found new to the county in 2003.

Dolycoris baccarum continues to spread in the county and was recorded from three new sites in 2010. It has now been recorded from fourteen 2km squares in the west and north of the county. The most southerly county record is from Brauncewell near Cranwell.

Adrian Royle sent in the only record of *Rhacognathus punctatus* from Kirkby Moor LWT Reserve and there was only one record of the blue bug *Zicrona caerulea* recorded by Charlie Barnes in the grounds of Banovallum House at Horncastle.

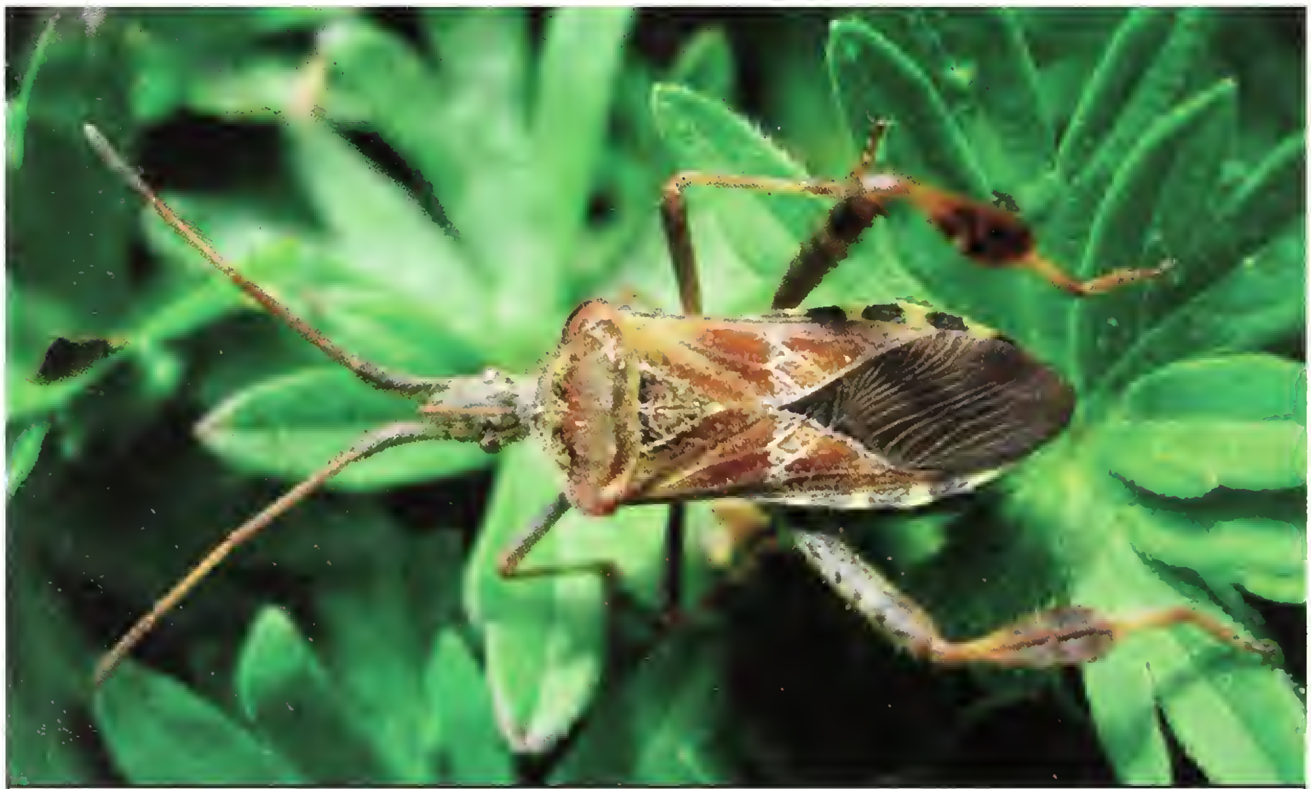
Once again I received more records of the green shieldbug *Palomena prasina* than for any other species and there were also a good number of records of the forest bug *Pentatoma rufipes*.

My thanks to Colin Smith, Adrian Royle, Charlie Barnes and John Davison for sending me records in 2010.

TERRESTRIAL BUGS

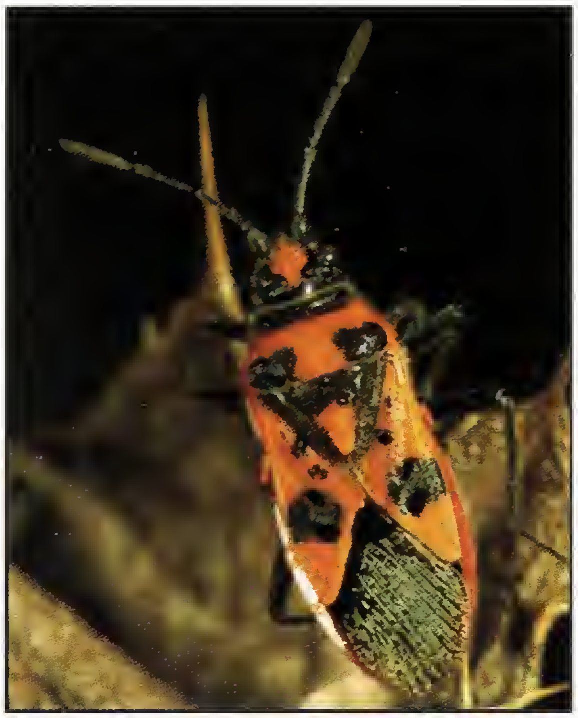
Colin Smith

There were three species of true bug added to the county list in 2010. The first was the western conifer seed bug *Leptoglossus occidentalis*; John Lamin found one in Rippingale 25th April. It is a North American species that has established itself in continental Europe and reached Britain in 2008. It is a large bug 15-20mm



Western conifer seed bug *Leptoglossus occidentalis* Photo J. Lamin in length and is very active and invasive. John's report was followed by six others during the year, the most northerly being in Immingham.

The striking red *Corizus hyoscyami* was the other new species; John Lamin found the first one at Bourne South Fen 30th July. He also found one at Kirkby Underwood. In the north of the county Geoff and Wendy Handford found one at Caistor and Adrian Royle another at Chambers Farm Wood.



Corizus hyoscyami Photo A. Royle

In June I received an e-mail from Mike Talbot who had found *Conostethus venustus* on a piece of waste ground at Bracebridge in Lincoln. It is a very small bug that is found on mayweed and has spread up from the Mediterranean. Mike's record is the fourth for Britain, the other three being in Yorkshire in May 2010. Unfortunately the area where it was found was sprayed with weed killer shortly afterwards ready for development.

There is another species that is on the increase and that is *Cimex lectularis* the bedbug. It is now a serious pest in most of our towns now, perhaps not a species most of us are hoping to come across. Thanks to all those who have sent me records and please do let me know if you come across a western conifer seed bug or any other species.

BOTANY

Paul Kirby

Seven field meetings were held in 2010:

April 18	Revesby Reservoir and adjacent woodland, TF36
May 22	Peacock Wood, Laughton Forest, SK89
June 27	Butterwick Common, SE80
July 18	Willow Tree Fen, LWT Reserve, TF12
August 8	Thorpe Culvert, TF46
September 12	Sailors' Home, TF44
October 10	Fungus Foray. Hoplands Wood & Willoughby Branch Line, TF47

Among the plants found at the meetings were:

sanicle *Sanicula europaea*, hybrid avens *Geum x intermedium* and bearded couch *Elymus caninus* at Revesby;

white sedge *Carex canescens*, slender sedge *C. lasiocarpa*, hare's-tail cottongrass *Eriophorum vaginatum*, bog-myrtle *Myrica gale* and shepherd's cress *Teesdalia nudicaulis* in Peacock Wood;

small-flowered winter-cress *Barbarea stricta*, meadow thistle *Cirsium dissectum*, marsh ragwort *Senecio aquaticus* and marsh arrowgrass *Triglochin palustris* at Butterwick ;

lesser water-plantain *Baldellia ranunculoides* and opposite-leaved pondweed *Groenlandia densa* at Willow Tree Fen;

soft hornwort *Ceratophyllum submersum* and flat-stalked pondweed *Potamogeton friesii* at Thorpe Culvert; and

sea barley *Hordeum marinum* and knotted hedge-parsley *Torilis nodosa* at Sailors' Home.

The Lincolnshire scad

Interest in this little known late ripening plum was aroused by an article in the autumn/winter edition of 'Good Taste', the Lincolnshire food magazine. This prompted much discussion on BBC Radio Lincolnshire as to the plum's identity and it became apparent that it was a recognised entity which was also known as Lincolnshire crack.

The general description: an unarmed, freely suckering, tall bush bearing small, globular, marble sized, sweet tasting plums, which ripen orange on one side and yellow on the other in November. The plant was said to occur quite frequently in Lincolnshire hedgerows.

The only reference I could find to scad was under bullace in Geoffrey Grigson's "The Englishman's Flora"....."Bullace. *Prunus domestica ssp. insititia* (L.) Poiret. Tree or shrub names beside bullace include bullison (Wilts), bullum-tree (Cornwall), crex (Cumberland), scad and scad-tree (Sussex, Kent & Lincolnshire), wild damson & wild–plum (Yorkshire)".

Few people had ever heard of the scad so tracking down actual examples proved difficult. Help came from Hugh Dorrington who was familiar with the plant and knew of some bushes he considered to be the genuine article in a pasture hedge near Sibsey. These were visited by PK, CH & HD on 21st April to see the bushes in flower and again on 4th November to collect some ripe fruit. The plums, which were just past their best, were globular 20 – 25mm in diameter, green/yellow ripening to yellow/pale pink with some pink spotting and a strong bloom. They had a sweet taste but sometimes with a slightly bitter tang. From observations on the bushes and the fruit the scad would appear to be a type of white bullace *Prunus domestica* subsp. *insititia* var. *syriaca*.

BSBI Threatened Plant surveys

The species covered in 2010 included corn marigold, sea barley and greater water-parsnip all of which are well represented in the county. Corn marigold, now *Glebionis segetum,* has been recorded from at least 19 hectads since 2000. There is a very extensive population of sea barley *Hordeum marinum* along the Wash sea bank in TF44 and recently there have been a few plants at one spot on the Humber bank in TA02, where the plant is at the northern limit of its British distribution. Greater water-parsnip *Sium latifolium* has been recorded in 18 hectads post 2000. Apart from the large population at Boultham Mere SK97 most colonies are small and many are introductions.

A sample of the 35,000+ records received in 2010 (date 2010 unless stated otherwise)

Lady's-mantle *Alchemilla xanthochlora*, TF19, PK & David Harrison [2009]. A large population beside a forest ride. New for hectad.

Deadly nightshade *Atropa belladonna*, TF28, CH & PK. Still present at two locations where first recorded in 1965.

White sedge *Carex canescens*, Willingham Forest, TF18, David Harrison & also JF. It was last seen in the Forest in 1950.

Divided sedge *Carex divisa*, SE82 & SE92, JF. Refound at its known location in each hectad.

Sea mouse-ear *Cerastium diffusum*, SE90, JF. On a sandy inland road verge. Despite its name it has been recorded from 9 hectads inland but only 7 along the coast.

Small toadflax, *Chaenorhinum minus*, Dwarf spurge *Euphorbia exigua*, both round and sharp-leaved fluellens *Kicksia spuria* & K. *elatine*, Venus's-looking-glass *Legousia hybrida*, shepherd's-needle *Scandix pecten-veneris* and night-flowering catchfly *Silene noctiflora*. All arable weeds in TF27, Clare Harrison.

Buttonweed *Cotula coronopifolia*, TF55, Jenna Poole. First recorded in the county in 2004 now known from 4 hectads.

Small teasel *Dipsacus pilosus*, TF16, Keith Robertson. Uncommon.

Purple viper's-bugloss *Echium plantagineum*, TF28 & TF37, PK & CH. Casual, in sown conservation strips on farms in both instances. It is a recognised contaminant of wild bird seed mixes containing quinoa *Chenopodium quinoa.*

Six species of orchid were recorded at Whisby SK96: Green-flowered helleborine *Epipactis phyllanthes*, 122 plants with 120 flower spikes, bee orchid *Ophrys apifera,* 404 emerging plants counted in November, broad-leaved helleborine *Epipactis helleborine,* 351 plants of which 159 flowered, southern marsh-orchid *Dactylyorhiza praetermissa,* 10,310 plants, twayblade *Neottia ovata,* 45 and pyramidal orchid *Anacamptis pyramidalis,* 1. Other notable records included heath cudweed *Gnaphalium sylvaticum* , maiden pink *Dianthus deltoides* and trifid bur-marigold *Bidens tripartita,* which was abundant.

Sea holly *Eryngium maritimum*, TF57, Brian Hedley. A new site.

Sea milkwort *Glaux maritima*, SE90 & SE91, Will Brown & PK. At inland industrial sites in both hectads. These are the first inland records for North Lincolnshire.

Heath cudweed *Gnaphalium sylvaticum*, TF19, David Harrison. A new colony in Forestry Commission woodland.

Orange balsam *Impatiens capensis*, SE91, JF & PK. New for hectad.

Saltmarsh rush *Juncus gerardii,* SE91, Will Brown & PK. On an inland industrial site. First non-coastal record in North Lincolnshire.

Round-fruited rush *Juncus compressus*, TA00, PK. Still present on the road verge where it was first noted in 2005.

Grass vetchling *Lathyrus nissolia*, TA30, W.R. Meek. Very scarce in Lincolnshire. A new hectad record.

Shoreweed *Littorella uniflora,* SE91, Will Brown & PK. A rare plant in Lincolnshire. Last recorded in SE91 in 1910 by W. D. Roebuck (Gibbons 1975) – the specimen is in the Lincolnshire herbarium. The only other extant sites in the county are the LWT Messingham Sand Quarry Reserve SE90 and Swanholme SK96.

Yellow bird's nest *Hypopitys monotropa* subsp. *hypophagea*, SE90, John Davison & John Petit. This, the only extant population in the county (first noted at this site in 2003) continues to thrive and a second colony has appeared close-by.

Wall lettuce *Mycelis muralis*, SK89 & TF18, JF. Only a few recent records.

Lemon-scented Fern *Oreopteris limbosperma*, SK89, TA01, TF09, TF18 & TF19, JF. This fern has now been recorded in 9 hectads post 2000.

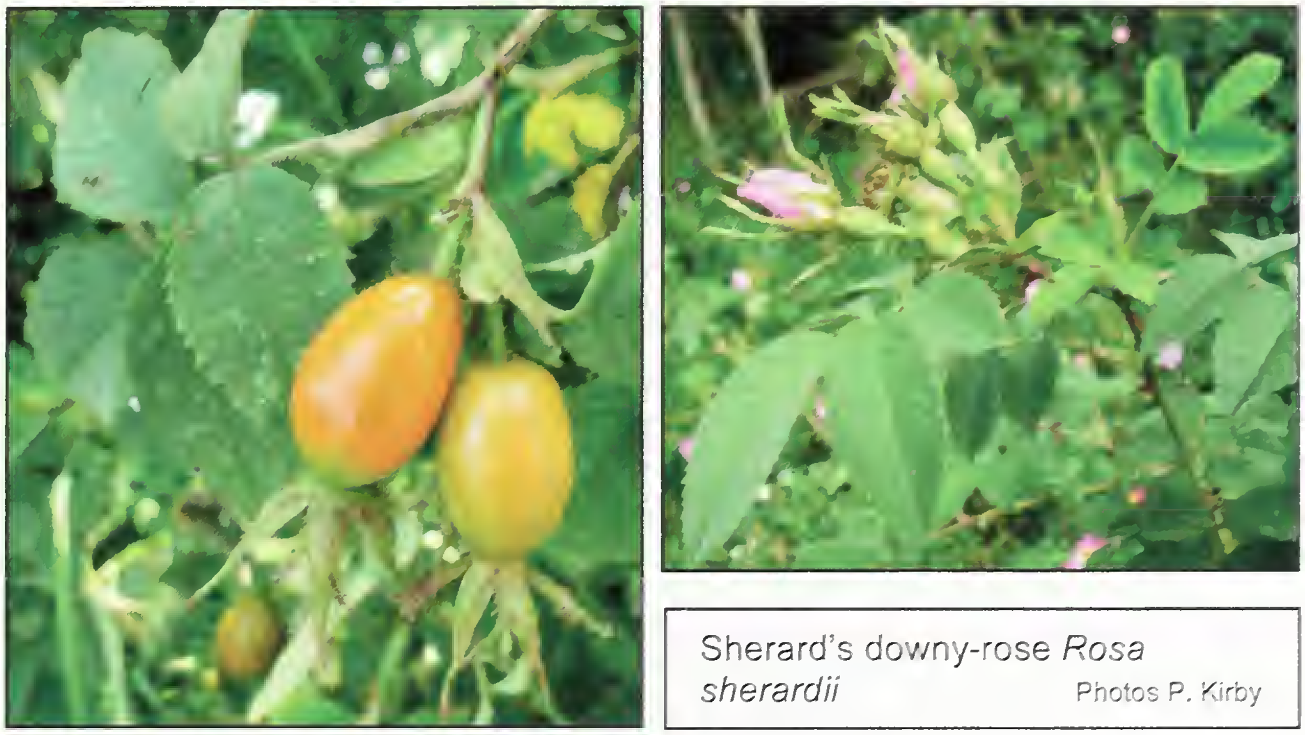
Prickly poppy *Papaver argemone*, 1 plant in TF26, CH & PK. Scarce in the county.

Corn parsley *Petroselinum segetum*, as an arable weed in SK98 & TF08 and in grassland on the sea bank in TA30, CH & PK

Cornfield knotgrass *Polygonum rurivagum*, TA10, PK & CH. Only the third record for the county.

Ivy-leaved crowfoot *Ranunculus hederaceus*, TF09, Jenna Poole. Very few recent records.

Sherard's downy-rose *Rosa sherardii*, Middle Rasen Plantation, TF19, JF & PK, confirmed Roger Maskew, the BSBI Rose referee. Predominantly a rose of northern and western Britain and very rare in the east & southeast. It was last recorded in the Market Rasen area in 1981.



Sherard's downy-rose *Rosa sherardii* Photos P. Kirby

A hybrid rose *Rosa x nitidula* [*Rosa rubiginosa* (female) *x R. canina* (male)], TA30, W.R. Meek. Det. Roger Maskew.

Golden dock *Rumex maritimus*, TF44, J.O. Mountford & J. Graham. New for hectad.

Spiral tasselweed *Ruppia cirrhosa*, TF44, James Cadbury. Very few recent records.

Narrow-leaved ragwort *Senecio inaequidens*, TA11, W.R. Meek. First noted in the county in 2004, now known from 5 hectads.

Small cord-grass *Spartina maritima*, TF44, Angus Garbutt. This small population is the most northerly in Britain.

Autumn lady's-tresses *Spiranthes spiralis*, TF41, Malcolm Pool & Richard O' Connor. 100+ flowering spikes. It was first recorded at this site in 1961 (Gibbons 1975).

Keeled-fruited cornsalad *Valerianella carinata*, TF56, CH & PK. Very few records, new for hectad

Many thanks to all who sent in records in 2010

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Key to initials in text
HD, Hugh Dorrington - JF, Jeremy Fraser - CH, Colin Hutchinson – PK, Paul Kirby.

MOTHS

Colin Smith

The year was generally a productive one for moths with numbers of common species being generally good. There have been almost 40,000 records, by far the most ever, the increase being mostly due to the increase in recorders and their activities. There have been 444 species of macro moths and 528 species of micro moths giving a total of 972, marginally down on last year.

There were fewer organised moth nights than usual but they were very successful. The LNU moth night at Peacock Wood 19th May produced 93 species, a very good total for the time of year, and it included *Cydia conicolana,* a new county record, flame carpet *Xanthorhoe designata*, fox moth *Macrothylacia rubi*, foxglove pug *Eupithecia pulchellata*, oak nycteoline *Nycteola revayana*, orange footman *Eilema sororcula* and red-green carpet *Chloroclysta siterata.*

Celypha rosaceana Photo M. Gray

The LNU moth group had a trip to Cleatham Quarry 1st July to look for chalk carpet *Scotopteryx bipunctaria,* a UK BAP and nationally scarce species, and was delighted to catch one among the 148 species seen. Other interesting species included leopard moth *Zeuzera pyrina*, campion *Hadena rivularis*, puss moth *Cerura vinula*, *Hellinsia osteodactylus*, *Endothenia gentianaeana, Celypha rosaceana and Coleophora discordella.*

Two light traps left out at Banovallum House, Horncastle for the LWT Bioblitz event 10th July caught 151 species and another 9 species were found during the day, mostly as leaf mines; the highlights were mullein *Shargacucullia verbasci* caterpillars, cream-bordered green pea *Earias clorana*, double dart *Graphiphora augur*, *Opostega salaciella* and *Pammene regiana.*

The last outing to mention is the very successful Butterfly Conservation moth night at Chambers 24th July when 96 micro and 119 macro species where recorded, a total of 215 species which was the best moth night so far recorded in the county; highlights included tissue *Triphosa dubitata*, orange moth *Angerona prunaria*, satin beauty *Deileptenia ribeata*, barred rivulet *Perizoma bifaciata*, mere wainscot *Chortodes fluxa*, *Adaina microdactyla, Elachista humilis, Agonopterix angelicella, Apotomis lineana* and *Oidaematophorus lithodactyla*.

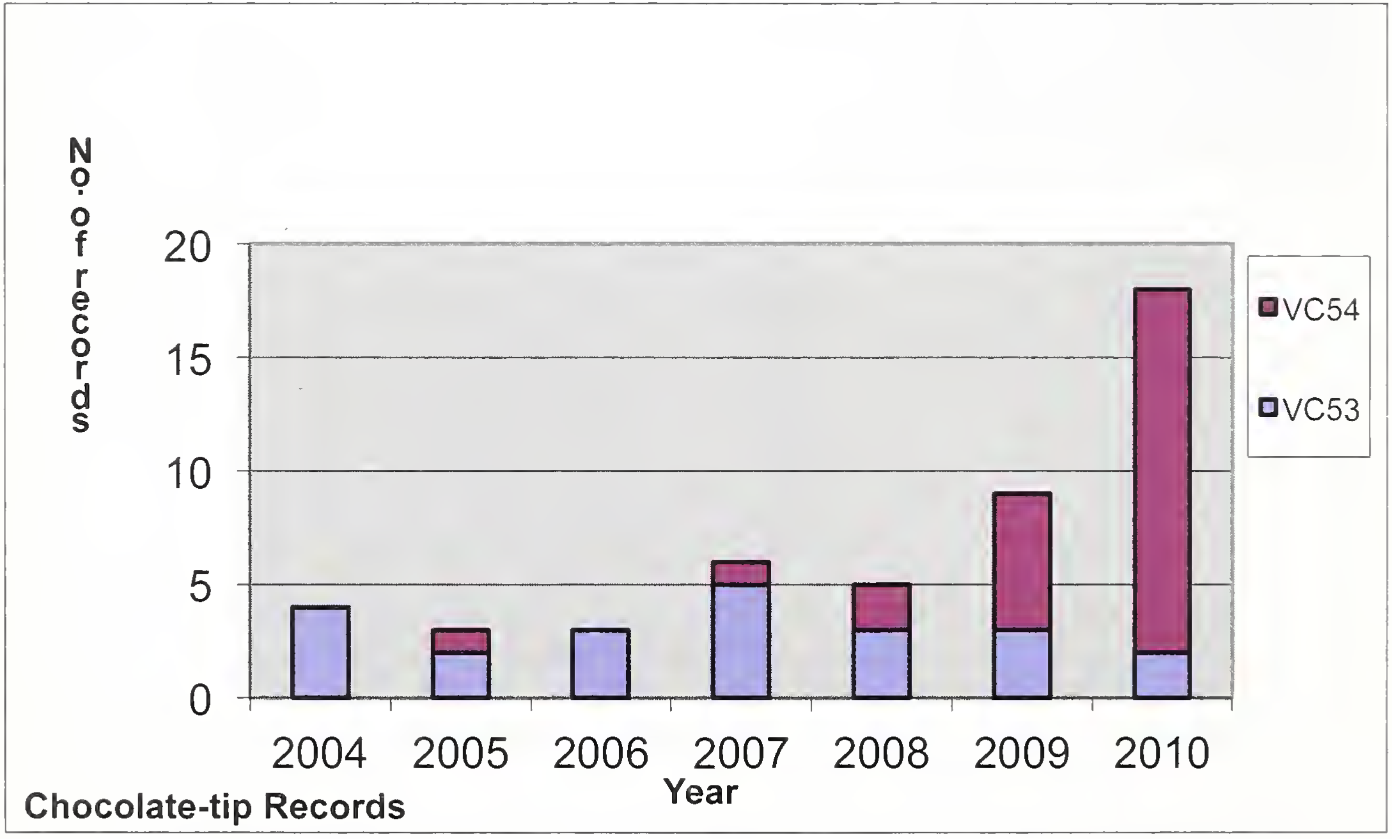
Clifden nonpareil Photo Roger Labett

It was not on the whole a good year for migrants, however there were some nice species recorded. Gem *Orthonama obstipata*, delicate *Mythimna vitellina*, white-point *Mythimna albipuncta*, humming-bird hawk *Macroglossum stellatarum* and convolvulus hawk *Agrius convolvuli* were all seen. The second county record for *Dioryctria sylvestrella* was found by Martin Gray in his garden at Broadholme 10th July. Bedstraw hawk *Hyles gallii* was found in a garage at Upton in July and Roger Labbett caught Clifden nonpareil *Catocala fraxini* at Louth 30th September.

Other interesting macros records include scarlet tiger *Callimorpha dominula* caught by Chris Dobson in June. The triangle *Heterogenea asella* was caught for the first time in Willingham Forest, the most northerly British record. A reddish light arches *Apamea sublustris* (p 280) was caught by Geoff Wright at Muckton 9th July. The treble brown-spot *Idaea trigeminata* was caught by Pauline Warman, the first confirmed record for many years. After years of searching Martin Gray found caterpillars of sloe pug *Pasiphila chloerata* on blackthorn and reared them through. The blackneck (p280) *Lygephila pastinum* had a very good year with more records this year than in the last decade. Another species that is doing well is the chocolate-tip *Clostera curtula* (p280) that, as you can see from the graph, is

continuing to expand into the north of the county. There were three other county and vice county records for micros, *Coleophora deauratella* new county record by Martin Gray at Broadholme 17th June. *Elachista gangabella* new VC54 record by Colin Smith in Great West Wood 2nd June and *Phaulernis fulviguttella*, a new county record by Karen and Sarah Hand at Gibraltar Point 5th August.

Sloe pug on blackthorn
Photo M. Gray



Chocolate-tip Records

FIELD TRIP REPORTS 2010

Revesby Reservoir TF303633 18 April 2010 Brian Hedley
This meeting to a private site, led by Brian Hedley, was attended by 15 people on a glorious spring day. A good range of woodland, grassland and wetland plant species were noted including sanicle, bugle and greater burnet-saxifrage. An excellent assemblage of 33 bryophytes was recorded including *Cryphaea heteromalla*, *Frullania dilatata, Radula complanata* and a selection of *Orthotrichum* species.
Fauna noted comprised an impressive list of 48 birds including tawny owl, red kite, Egyptian goose, kingfisher and nuthatch. Fallow deer, muntjac, grass snake and toad were found together with a good list of invertebrates including brimstone butterfly, a longhorn beetle (*Rhagium mordax*), bee-fly, orange ladybird and slender groundhopper. Worth a return visit during summer months.

Peacock Wood (Laughton Forest) SK827965 22 May 2010 Brian Hedley
This meeting was held during a very warm and dry period and part of the site had recently been damaged by a forest fire. Twenty four people attended this afternoon and evening (moths and bats) meeting which was led by Brian Hedley and Colin Smith. Many thanks to the Forestry Commission for allowing access.
A good range of woodland, heathland and wetland plant species were recorded including hare's-foot cotton-grass, white sedge and large stands of bog myrtle.
A very impressive invertebrate list was complied for the site with over 100 moth species including orange footman, pine hawk, poplar hawk, birch mocha, green silver-lines and a first for the county, *Cydia conicoloana*.
Other invertebrates included green tiger beetle, eyed ladybird, four-spotted chaser and very good numbers of brimstone butterflies.
Solitary bees and wasps included *Andrena haemorrhoa, A.nigroaenea, A.barbilabris, Sphecodes pellucidus, Nomada marshamella, N.flava, N.ruficornis* and *Argogorytes mystaceus*.
A restricted but interesting bird list of 32 species was noted including nightjar, siskin, cuckoo, woodcock and tawny owl.
Grass snake and common lizard were also noted.

Butterwick Common. SE847063 27 June 2010 Brian Hedley
A joint meeting with the British Dragonfly Society, led by Brian Hedley and Paul Kirby, and attended by nine people. One of the hottest days of 2010 and it also clashed with the infamous England v Germany World Cup match. Some 50 plants of meadow thistle were counted and this is one of two known sites in Lincolnshire. Other plants included sneezewort, great burnet, marsh arrowgrass and marsh ragwort.
Nine dragonfly/damselfly species were noted including 100's of red-eyed damselflies, 30 black-tailed skimmers and a single variable damselfly.
Ten butterfly species included a single brown argus and good numbers of meadow browns, ringlets and large skippers.
Birds included green sandpiper, 10 snipe, a shelduck family and several yellow wagtails.

Willow Tree Fen TF174223 18 July 2010 Richard Chadd

A warm and sunny July day attracted a fairly good turnout to this event, with attendees well into double figures. After a short talk by the Community, Project and Education Officer, Marcus Craythorne, the members dispersed across the site taking in the wet and dry areas.

Botanically, there were some interesting records including a profusion of opposite-leaved pondweed *Groenlandia densa* L. growing in the boundary drain to the east of the Fen. This is a widespread but increasingly scarce plant in the UK, absent in many previously known locations and a strong population in Lincolnshire is welcome.

By far the most important records on the day, however, were the aculeate hymenoptera found by Alan Phillips. Among nine records of bumblebees were six specimens of *Bombus ruderatus*, a UK Biodiversity Action Plan species here on the northern edge of its modern range. The six specimens were in both banded and black forms. Alan also found six species of solitary bee, including a confirmed record of *Andrena flavipes* – a new county record on the northern edge of its range. South Lincolnshire is now a confirmed northern limit for the species in Britain.

Charlie Barnes did his usual sterling work looking for beetles, with, in a list on the day of 17 taxa, the chrysomelid species *Donacia marginata*, marsh beetle *Scirtes hemisphaericus* and weevil *Notaris acridulus* all present. None of these are especially rare, but represent a trinity of nice wetland species. I added the Nationally Notable water-beetle *Rhantus grapii* (Gyllenhal) to this list, along with 6 other water beetle species (a total of 24 beetles on the day), 5 water bugs, including the locally scarce *Hesperocorixa linnaei* (Fieber) and 24 other miscellaneous freshwater taxa, all from the borehole ponds to the north.

Charlie and Brian Hedley between them recorded Roesel's, dark and speckled bush crickets as well as 14 species of butterfly, including Essex skipper, four moths in the daytime (cinnabar moth caterpillars were in profusion on ragwort) and 14 species of dragonfly, including the decidedly local variable damselfly *Coenagrion pulchellum* (van der Linden).

Brian recorded 21 birds, many singing, with Nick Tribe adding a little grebe record to this. Brian also found signs of water vole activity in the Main Drain.

In all, an enjoyable day with many species and several highlights.

Thorpe Culvert TF468611 8 August 2010 Chris Manning

Twelve members attended on a hot summer's day led by Chris Manning.

Mammals included brown hare and brown rat, also unfortunately signs of American mink.

There were 27 bird species noted including good views of two kingfishers, yellow wagtail, green sandpiper and barn owl.

Nine species of dragonfly and damselfly were noted including small red-eyed damselfly (a new site with breeding activity noted), emerald damselfly, banded demoiselle, emperor and ruddy darter.

Ten species of butterfly were noted including wall brown, small copper, comma and speckled wood.

A good variety of wetland and aquatic plant species was recorded totalling 142 species including soft hornwort (only the third site in Lincolnshire for this species), fan-leaved water crowfoot, flat-stalked pondweed and flowering-rush.

Wrangle Marsh (Sailors Home area) TF446492 12 September 2010 Brian Hedley

A meeting only attended by five people including the two leaders, Brian Hedley and Paul Kirby, to a remote stretch of Lincolnshire coast. Fortunately, the threatened heavy rain kept away. Frequent small patches of the Nationally Scarce sea barley were noted along the sea bank together with lesser amounts of sea wormwood and knotted hedge-parsley. Waxcap fungi were noted as frequent in the pasture just inland of the seabank.

Some invertebrate sampling of brackish pools revealed *Gammarus duebeni*, *Lineus rubber*, *Palaemon elegans* and *Lekanesphera rugicauda*. Other notable invertebrates included the Nationally Scarce (Nb) ladybird *Hippodamia variegata* and also harlequin ladybird. Butterflies and dragonflies were fairly scarce but did include two painted ladies and two migrant hawkers. Fish included sand goby. Bird migration was in full swing during this meeting with hundreds of swallows, house martins, meadow pipits and lesser numbers of yellow wagtails passing through. Three hobbies, two marsh harriers, a peregrine and two ruffs were also noted.

Hopland's Wood (LWT reserve) TF4571 10 October 2010 Ray Halstead

This meeting was led by Ray Halstead ably assisted as always by Ken Rowland and Jackie Freeman. Around 14 people attended on a bright but windy autumn afternoon. It was hoped that the group could split up with the others foraying at the Willoughby Branch Line but conditions and numbers present prevented this. A total of 71 species were recorded, though there were no new records for this venue, it was good to see *Auricularia mesenterica* still fruiting on the same ash tree, (*Fraxinus excelsior*), as it has been for the last forty years.

The most frequently found group were the mycenas with 10 different species being found including the easily overlooked *Mycena adscendens* and *M. vitilis*. Five *Lactarius* species were found along with 4 each of the genus *Coprinus*, *Clitocybe* and *Psathyrella*. Only two species of *Russula* were found, *R. aeruginea* and the very common *R. ochroleuca*. Conspicuous by their absence were members of the Boletus genus, only *Paxillus involutus* were recorded on the day with none of the true Boletes being found.

Club fungi were represented by four different species, *Clavaria acuta, Clavulina cristata, Clavulina cinerea* and *Clavulinopsis helvola. Stereum hirsutum, S. submentosum, Trametes versicolor* and *Inonotus hispidus* were the only bracket fungi recorded.

Clavulina cristata.
Photo Ray Halstead

TRANSACTIONS OF THE LINCOLNSHIRE NATURALISTS' UNION

Officers of the Union in 2010
(Year of election to the Executive Committee)

President Ken Rowland (2009)
President-elect Barrie Wilkinson (2010)
Honorary Secretary Charlie Barnes (2010)
Honorary Treasurer Ian MacAlpine-Leny (2001)
Membership Secretary via LWT
Publicity Secretary Vacant
Programme Secretary Vacant (winter) and Brian Hedley (2007) (summer)
Editor of Transactions Nick Tribe (2004)
Auditor Emma Murray (Nicholsons)

Executive Committee Richard Chadd (2002), Phil Porter (2008), Colin Smith (2001), Chris Manning (2001).

External representatives Lincolnshire Biodiversity Partnership - Ian MacAlpine-Leny, Lincolnshire Bird Club Committee - Ian MacAlpine-Leny, Lincolnshire Wildlife Trust Biodiversity Team - Richard Chadd, Local Wildlife Sites Panel - Richard Chadd

Section Recorders

Ants, wasps & bees Dr Michael Archer	**Bats** Mrs Annette Faulkner and Ms Caroline Tero
Beetles Charlie Barnes	**Bryophytes/lichens** Professor Mark Seaward
Butterflies Mr Allan Binding	**Dragonflies** Mr Nick Tribe and Mr Richard Chadd
Fish Mr Nick Bromidge & Mr Ian MacAlpine-Leny	**Flies** Mr Andrew Godfrey
Freshwater invertebrates Mr Richard Chadd	**Fungi** Mr Ray Halstead
Grasshoppers, etc. Mr Brian Redman	**Geology** Mr John Aram
Higher plants Mr Paul Kirby	**Mammals** Mr Chris Manning
Macro moths Mr Colin Smith	**Marine invertebrates** Mr Helgi Gudmundsson
Micro moths Mr Colin Smith	**Molluscs** (non –marine) Ms Rosie Blackman
Plant Galls Mr Graeme Clayton	**Pseudoscorpions** Mrs Annette Binding
Sawflies Dr David Sheppard	**Spiders** Mrs Annette Binding
Shieldbugs Mrs Annette Binding	**True bugs** Mr Colin Smith

SECRETARY'S REPORT

Charlie Barnes

With membership now exceeding 200, the LNU continues to grow. This is reassuring in the wake of a report recently published by the Natural History Museum and the Open Air Laboratories titled Natural history societies and recording schemes in the UK: A consultation into the factors that limit their functioning and development, which aims to highlight the strengths and weaknesses facing natural history societies in the modern age. Indeed, it is with the help of organisations like OPAL that the LNU has been able to broaden its membership and continue to be of benefit to its members (which is after all, what the LNU is for).

2010 however has not only seen an increase in readership, but also the succession of a number of new section recorders. There is often a fear of a loss of local (and indeed national) expertise in natural history, as the younger generation are no longer captivated by the life around us – for the moment at least, I think we can indulge in the taxonomic know-how available to us in the county. With continued effort, the LNU and its members can play a vital role in encouraging the next generation, and supporting the development of the skills and knowledge needed to do our wildlife justice.

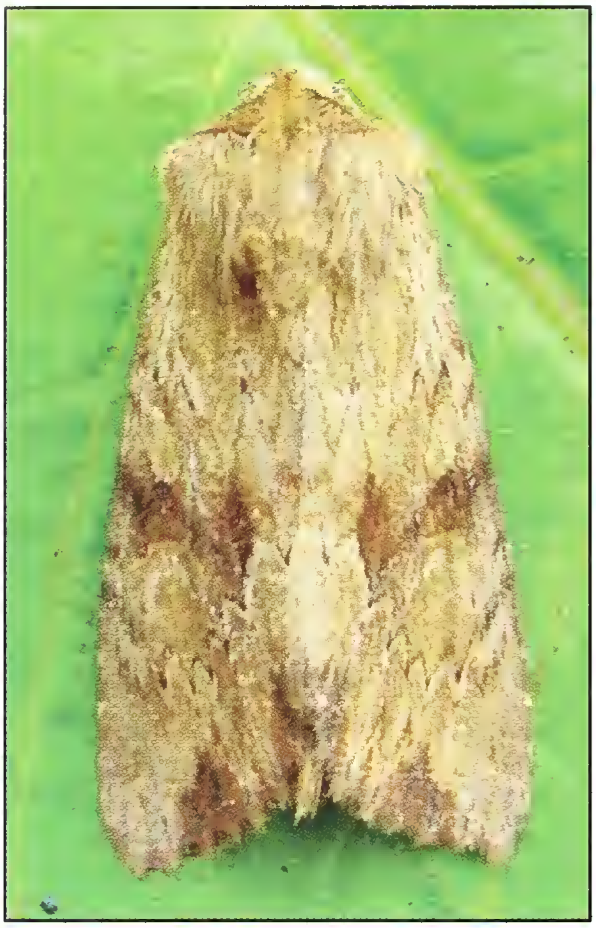
The LNU continues to run an excellent programme of summer field meetings and winter indoor talks, and 2010 was no exception with a wide variety of habitats and topics covered. Joint working with other groups such as the Lincolnshire Wildlife Trust and British Dragonfly Society is always rewarding and 2011 is set to continue this trend with field meetings taking place with the Yorkshire Naturalists' Union at Thorne and Hatfield Moors and a visit to Riseholme College of the University of Lincoln which includes an opportunity to view the LNU collections (and hopefully recruit a few more members from the resident students).

Meetings in 2010

Saturday 9th January Talk by Dr Dorothy Gennard 'Grisly biology – an introduction to forensic entomolgy'
Saturday 13th February Recorders' meeting
Saturday 27th February Talk by Steve Brooks 'Dragonflies'
Saturday 13th March LNU AGM and Presidential Address by Ken Rowland 'Some Lincolnshire fungi without caps'

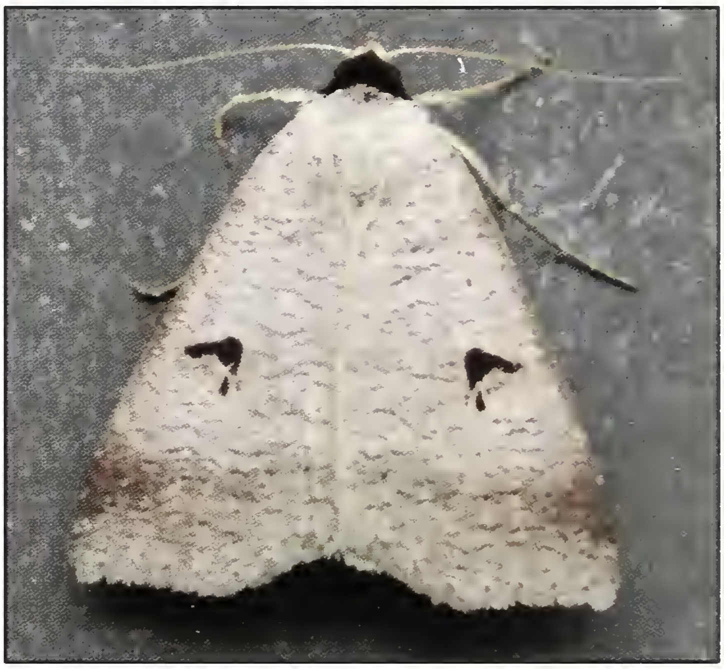
711th field meeting	Sunday 18th April	Revesby Reservoir and woodland
712th field meeting	Saturday 22nd May	Peacock Wood (Laughton Forest)
713th field meeting	Sunday 27th June	Butterwick Common
714th field meeting	Sunday 18th July	Willow Tree Fen
715th field meeting	Sunday 8th August	Thorpe Culvert, Wainfleet
716th field meeting	Sun. 12th September	Sailors Home, Wrangle
717th field meeting	Sun. 10th October	Hoplands Wood and Willoughby Branchline

Saturday 6th November Talk by David Sheppard 'No bones about it'
Saturday 27th November Talk by Dave Millar 'Reserve management along the Lincolnshire coast'

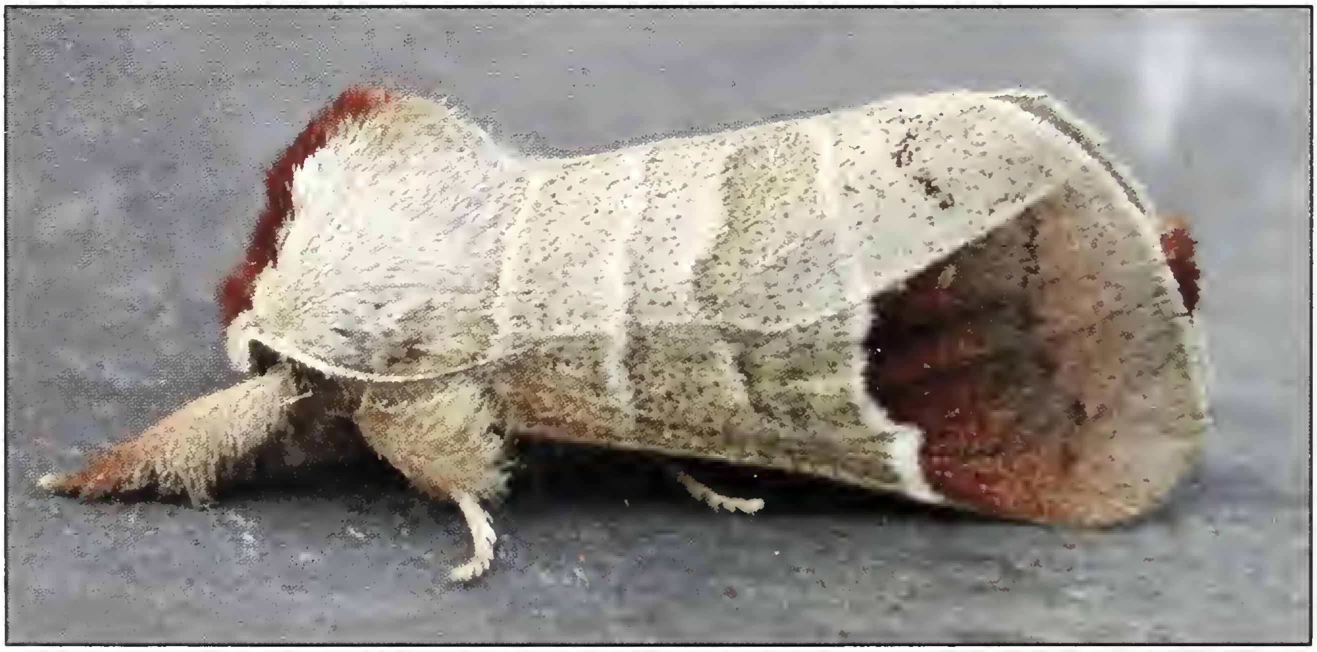


Reddish light arches (Page 273)
Photo R. Labbett

Blackneck (Page 273) Photo M. Gray



Chocolate tip (Page 273)
Photo M. Gray



Contributing to *The Lincolnshire Naturalist*

We are constantly on the lookout for full length articles or short notes, even a few lines which can be useful space fillers, on any aspect of our natural history, current or historic. Consider a note in *The Lincolnshire Naturalist* for any new or significant observations. Articles should be typed. It would help the editor tremendously if they could either be e-mailed or sent on CD or floppy disk with accompanying paper copy, in Word© or Word Perfect© format. Drawings, colour or black & white photographs, colour transparencies or negatives (please include a print) can be included. If you submit your own photographs, take them or scan them at a resolution of at least 200 dots per inch and at a size equal to or larger than the size they will be printed at (approximately 11.5x7.5cm). Colour illustration may be rendered to black and white. Please give a caption. Illustrations will be returned and edited text resubmitted to the author for approval and proof-reading before publication.
Convention adopted for names - Latin names should be *italicised*, **not** (bracketed) nor underlined and should follow the English name (where applicable) with no separating comma. English names should start with lower case letters unless incorporating other names warranting capitalisation (eg Brandt's bat).

References to journals and books should please be as below. Please note and use the capitalization and italic convention.
WOODRUFFE-PEACOCK, Rev E.A., 1900. The Lincolnshire Naturalists at Freiston. *The Naturalist*, **25**: 141-144.
DUDDINGTON, J. & JOHNSON, R. 1983. *The Butterflies and Larger Moths of Lincolnshire and South Humberside*. Lincolnshire Naturalists' Union. Lincoln. 299pp.

The final copy date is **31st March** of the year in which the Transactions are to be issued. Please contact the editor directly if there is difficulty in meeting this deadline. If in any doubt as to whether your observation merits a note or an article, or you have any other queries please do get in touch with the editor c/o Lincolnshire Naturalists' Union, Lincolnshire Wildlife Trust, Banovallum House, Horncastle, LN9 5HF to whom texts should be sent. A guidance note is available and is sent out to recorders. Otherwise, please attempt to imitate the format in this issue of the Lincolnshire Naturalist.

EDITORIAL

Nick Tribe

Welcome to my final edition of Transactions as editor.

I hope you find this edition as stimulating and engaging as usual. I'd like to think that your contributions make this journal at least the equal of that of any other natural history recording society. Once again I thank all contributors for their articles, illustrations, skill and patience and congratulate them all on the standard of their work.

I would like to draw attention to the conclusion of Michael Archer's multi-part work on the bees and wasps of Lincolnshire; I expect that this series of articles will be of great value to recorders present and future.

I wish my successor Phil Porter all the best with The Lincolnshire Naturalist. A fresh pair of eyes and hands are often welcome and I have no doubt that the journal will go from strength to strength.

THE LINCOLNSHIRE NATURALIST
including
Transactions of the Lincolnshire Naturalists' Union
for 2010
Volume 27, Part 4, 2011

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cover picture common morel (Photo: Ken Rowland) Line illustration from Natural England